Netherlands Enterprise Agency

Market report on opportunities for the Netherlands in Food Production Resilience in Sweden

Opportunities for Dutch SMEs within Controlled Environment Agriculture (CEA) in Northern Sweden

Commissioned by the Netherlands Enterprise Agency (RVO) on behalf of the Ministry of Agriculture, Fisheries, Food Security and Nature.

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Summary

This report examines the opportunities for Dutch small and medium-sized enterprises within Controlled Environment Agriculture in Northern Sweden, underscoring the region's potentials for resilient and sustainable food production solutions.
Sweden's national food strategy highlights the urgent need for greater self-sufficiency and innovation, particularly in the north where food production faces climate, infrastructure, and supply chain challenges. Unlike southern Sweden—where greenhouse horticulture is already well-established and many actors are active—the north presents untapped opportunities. The wish to become more self-sufficient and resilient in northern regions is driving interest in advanced solutions and international partnerships, making Dutch expertise in high-tech greenhouse systems especially relevant.

Several technical and logistical challenges are analysed and framed as opportunities for collaboration. Dutch SMEs can leverage their advanced technologies, sustainable practices and experience in greenhouse management to address these needs, particularly through pilot projects and ecosystem partnerships in the north.

The report also reviews the competitive and collaborative landscape, including research initiatives, innovation hubs, and government incentives that support food security and sustainable agriculture. It details entry barriers and cultural factors, alongside networks, events, and available financing or grants, to help Dutch companies navigate the Swedish market.

In summary, Sweden-Dutch CEA partnerships offer mutual benefits and transformative potential. By prioritizing long-term cooperation, focusing on northern Swedish regions where demand for self-sufficiency is highest, leveraging pilot-driven strategies and aligning with Sweden's national objectives, Dutch SMEs are well-positioned to contribute meaningfully to Sweden's transition toward resilient, sustainable food systems. High-impact projects such as building a greenhouse in Boden while using waste heat from a data center is one of the examples used in this report as real-life case studies.[1]

Image 1 Hietala Handelsträdgård during the late winter, 2026

[1] Boden greenhouse data center project

Contents

Glossary of terms

CAP	Common Agricultural Policy (related to Sweden's CAP Strategic Plan)
CEA	Controlled Environment Agriculture
EU	European Union
GDP	Gross Domestic Product
Jordbruksverket	Swedish Agricultural Board
LRF	Federation of Swedish Farmers (LRF Trädgård focuses on horticulture specifically)
SCB	Statistics Sweden
SME	Small and Medium Enterprises

In this report, the following exchange rate is used: 1 EUR = 10.7 SEK.

Image 2 One of Svegro's greenhouses, March 2026.

1 Introduction

Resilient and sustainable food production has emerged as a strategic priority across Europe, driven by increasing geopolitical uncertainty, supply chain disruptions, climate-related risks and rising awareness of food system vulnerabilities. In this context, controlled environment agriculture (CEA)—including high-tech greenhouse production and indoor farming systems—has gained renewed relevance to increase domestic food production, reduce import dependency and enhance system resilience in the North of Sweden.

The region represents a particularly relevant case within the food production resilience development. Recent years have seen a growing policy focus on food security, self-sufficiency and preparedness, including the integration of food production into a newly defined national preparedness sector. This shift has created both political momentum and practical demand for technologies and solutions that can support stable, year-round production under challenging climatic and geographic conditions. At the same time, Sweden's updated Food Strategy 2.0 (2025) reflects a recalibration of priorities, placing stronger emphasis on competitiveness, productivity and domestic production capacity as enablers of food security. Climate and environmental ambitions remain integral to the strategy but are more implicitly addressed and less foregrounded than in previous policy frameworks.
Against this backdrop, the Netherlands—internationally recognised for its leadership in high-tech greenhouse systems, CEA solutions and agri-food innovation—is well positioned to contribute knowledge, technologies and collaborative models that align with Sweden's evolving needs. This market study has been initiated to explore whether, where and how Dutch businesses and institutions can meaningfully engage with Sweden's transition towards food production resilience and to translate this into concrete opportunities.

1.1 Purpose and background of the study

The purpose of this study is to provide Dutch public and private stakeholders with a structured overview of opportunities in Sweden related to resilient food production, with a specific focus on controlled environment agriculture and innovative greenhouse technologies. The study is commissioned in preparation for an innovation mission to Sweden planned in 2026 and is intended to serve as a strategic input for mission design, stakeholder selection and follow-up engagement.

Sweden's food system has increasingly been recognised as vulnerable due to disruptions in global supply chains, geopolitical instability and structural constraints related to climate and geography. In response, food supply and domestic food production have become part of Sweden's broader civil preparedness and total defence planning.[2] Recent policy developments place stronger emphasis on strengthening the competitiveness and long-term viability of Swedish agriculture in order to increase domestic production capacity and reduce reliance on imports. As a result, food production is no longer viewed solely as a market or agricultural issue, but as a component of national resilience and security.[3]
Within this context, innovative production systems that enable efficient, predictable and locally adapted food production are receiving increased attention. CEA solutions—ranging from advanced greenhouse construction to climate control, automation, energy optimisation and data-driven cultivation—are particularly relevant given Sweden's climatic conditions and ambition to produce more food year-round.
The Netherlands has a long-standing reputation as a global frontrunner in these domains. Dutch expertise spans the full value chain, from greenhouse design and climate systems to digital decision support, plant genetics, circular resource use and integrated production concepts. At the same time, the Swedish horticulture and CEA market is relatively small and transparent.

[2] Food preparedness for a new era Livsmedelsberedskap för en ny tid - Regeringen.se
[3] Strategy for the common agricultural policy 2030 and beyond, Swedish government

The study therefore aims to identify realistic, value-adding opportunities where Dutch innovation can complement Swedish needs, while also clarifying the policy, regulatory and ecosystem conditions that shape market entry and collaboration.

1.1.1 Why Sweden is interesting for the Dutch high-tech greenhouse sector

Sweden's relevance for the Dutch high-tech greenhouse and CEA sector lies not in market size, but in strategic fit. The country combines ambitious self-sufficiency goals with structural production constraints, creating demand for the type of technologies and system solutions in which Dutch companies specialise.

First, Sweden's climatic conditions—characterised by long winters, limited daylight during parts of the year and significant regional variation—make traditional open-field production challenging and increase the relative importance of controlled environments. High-tech greenhouses and indoor farming systems offer a pathway to stable, year-round production, particularly for fresh produce, leafy greens, herbs and seedlings.

Second, Sweden's current policy trajectory places increasing emphasis on resilience, preparedness and domestic capacity. This creates a policy environment in which investments in protected cultivation, local production hubs and innovative food systems can be framed not only as commercial ventures, but also as contributions to national objectives. For Dutch companies, this opens opportunities to engage in public-private partnerships, pilot projects and demonstration facilities linked to regional development and preparedness agendas.

Third, Sweden offers favourable structural conditions in terms of energy systems and emerging CO_2 infrastructure, which are critical enablers for high-tech greenhouse operations. Sweden's energy mix is characterised by a very high share of fossil-free electricity, primarily from hydropower, nuclear power and wind, resulting in low-carbon and relatively stable electricity supply compared to many other European markets.[4] In parallel, the Swedish government is actively promoting carbon capture and utilisation technologies as part of its climate policy framework, including capture of biogenic CO_2 from industrial and energy facilities.[5] While these initiatives are primarily driven by climate objectives, they contribute to the gradual development of CO_2 capture, transport and storage infrastructure that, over time, may also enable access to sustainable CO_2 streams for greenhouse use. Together, these factors strengthen Sweden's long-term attractiveness for energy- and CO_2-dependent horticultural systems, particularly for operators seeking low-carbon production environments aligned with national climate and energy policy.

Fourth, bilateral interest between Sweden and the Netherlands has been clearly demonstrated in recent years. A Swedish provincial mission to the Netherlands in January 2024 focused on learning from Dutch high-tech greenhouse expertise, followed by a Swedish-led network event at the Dutch Horticenter. These initiatives signal both political and sectoral willingness to deepen cooperation and provide an existing foundation upon which further collaboration can be built.

Finally, Sweden's innovation ecosystem—characterised by strong research institutions, regional development agencies and an openness to testing new solutions—aligns well with the Dutch model of applied innovation and living labs. For Dutch SMEs and niche providers, Sweden can function as a testbed market where technologies are adapted to extreme conditions and validated in close cooperation with public and private partners.

[4] Swedish Institute, Energy use in Sweden

[5] Swedish Energy Agency, Carbon capture and storage

1.2 Sweden's food strategy, self-sufficiency goals and relevance for Dutch stakeholders

Sweden's Food Strategy 2.0, updated in 2025, represents a pivotal policy framework shaping the future of the country's agricultural and food systems. The strategy aims to increase productivity, competitiveness and viability across the food chain, with the overarching goal of strengthening domestic food production and resilience. While sustainability remains a stated consideration, recent years have seen a deliberate prioritisation of food security and self-sufficiency, including a scaling back of certain climate and environmental policy ambitions in favour of increased production capacity.

Image 3 Hietala Handelsträdgård, located close to the polar circle, end of March 2026

For Dutch stakeholders, this policy shift is highly relevant. It signals a clear window of opportunity for investments, technologies and partnerships that demonstrably contribute to production efficiency, operational reliability and food-system resilience, as these priorities now receive stronger political backing in Sweden.

At the same time, the Swedish operating environment differs from that of the Netherlands in how policy objectives are translated into investable opportunities. While Sweden has active regional actors and investment initiatives — including in Northern Sweden — policy objectives, funding criteria and support instruments are primarily defined at national level and implemented through central agencies. Regional initiatives therefore operate largely as facilitators and entry points within nationally defined frameworks, rather than as autonomous policy designers. As a result, successful market entry requires not only engagement with regional stakeholders, but early alignment with national policy priorities, eligible support schemes and responsible public authorities, making structured market analysis and stakeholder mapping essential when transferring Dutch solutions to the Swedish context.

This report responds to that need by addressing the overarching research question: *What are the opportunities for Dutch businesses and institutions in controlled environment agriculture that can contribute to resilient food production in Northern Sweden?*

To answer this, the study will examine the market and demand context, the policy and regulatory landscape, the ecosystem of innovation actors and support structures and the competitive and collaborative environment, including Sweden's emerging preparedness sector.

By doing so, the report aims to support Dutch policymakers, companies and innovation organizations in making informed strategic decisions. Both in preparation for the 2026 innovation mission and in the longer-term development of Dutch-Swedish cooperation in food production systems that contribute to resilience.

"The American sales market is becoming increasingly challenging for Dutch companies, which is why our sector is shifting its focus more toward alternatives in Northwest Europe, such as Sweden. Climate change and other factors are causing growing issues in Spain, Morocco, and Tunisia, making Sweden more attractive as a new market for Dutch greenhouse and cultivation technology suppliers."
Annie van de Riet, Chair of the Dutch association AVAG for greenhouse construction and technology.

2 The Swedish market

Sweden is a geographically large but sparsely populated country, covering ≈450,000 km² with ≈10.7 million inhabitants. The Netherlands is much smaller at ≈41,900 km², roughly one-tenth of Sweden's land area and has a population of ≈18.4 million, making it one of the most densely populated countries in Europe.

2.1 Overview of the Swedish greenhouse horticulture market

2.1.1 Greenhouse growing and the most common crops

Some vegetables do not thrive particularly well in Sweden's cool climate and are therefore grown in greenhouses, such as tomatoes and cucumbers. Pots of lettuce and herbs are also cultivated in greenhouses to enable year-round delivery, as are sprouts and microgreens. Nowadays, the season is longer for many Swedish-grown greenhouse vegetables. Swedish cucumbers and tomatoes are generally available from April to November, but some tomato growers use lighting and can harvest throughout the entire year.

Across the country, there were around 300 companies cultivating greenhouse vegetables in 2017, covering a total of 130 hectares. Together, greenhouse vegetable growers produced a value of 1.1 billion SEK (103 million EUR) in 2019. The largest volumes were tomatoes and cucumbers, at 17,000 and 30,000 tonnes respectively. There were significant values in other crops such as herbs, lettuce, sprouts and microgreens.[6]

Table 1 Total number of agricultural enterprises by type of operation[7]

	2016	2020	2022	2024	2025
Crop production	17,677	16,399	16,083	15,045	14,855
Agricultural crops	15,902	14,711	14,348	13,619	13,463
Vegetable, ornamental and nursery crops	788	741	746	550	539
Fruit and berries	353	371	405	340	323
Mixed crop production	634	576	584	536	530

Swedish greenhouse production is dominated by cucumbers, tomatoes, herbs and potted lettuce, which together account for about 90% of all cultivated greenhouse area. In 2024, cucumber area declined 10% to its smallest level since 2009, while tomato area increased 6%. Potted lettuce and herb areas also decreased sharply, though such fluctuations are common due to mobile growing systems.

Table 2 Greenhouse area for growing greenhouse crops 2017-2024. The areas are given in square meters.

	2017	2020	2023	2024
Cucumber	670,000	696,600	665,900	600,200
Potted lettuce	47,200	40,200	51,000	39,400
Aromatic herbs	99,400	123,900	121,200	110,900
Tomato	401,300	459,900	425,600	450,400

Production fell for all four crops in 2024: herb output dropped 17% to its lowest level since 2012, while cucumbers, tomatoes and potted lettuce decreased 6–9%, with tomatoes reaching their lowest harvest since 2017. Long-term trends show rising cucumber yields (now 30% higher than in the 2000s), modestly lower tomato production, significantly increased herb output and slightly declining potted lettuce production.

[6] LRF greenhouse vegetables, with data from Jordbruksverket

[7] Jordbruksverket statistics database on number of agricultural companies by type of operation

Kristin Orrestig, CEO at Svegro, mentioned: *"The Swedish market for herbs and leafy greens is already well supplied by domestic producers, and previous waves of imports have significantly affected local volumes. This has made established growers cautious towards new foreign entrants in this segment."*

Table 3 Harvest of greenhouse crops 2017-2024. Cucumber and tomato are reported in tons, potted lettuce and herbs are reported in thousands of pots.

	2017	2020	2023	2024
Cucumber	30,600	30,900	32,600	29,800
Potted lettuce	13,900	11,400	11,100	10,400
Aromatic herbs	47,700	47,100	47,100	39,300
Tomato	14,400	19,100	17,500	16,100

Cucumber yield hit a record 49.7 kg/m², while tomato yield fell to 35.7 kg/m², the lowest since 2012. [8]

Table 4 Yield for cucumber and tomato in kg/square meter.

	2008-2012	2013-2017	2018-2022	2023	2024
Cucumber	42.4	44.7	45.5	49.0	49.7
Tomato	38.1	38.4	42.3	41.1	35.7

[8] Jordbruksverket statistics on greenhouse crops

2.1.2 Developments within greenhouse growing in Sweden and a comparison to the Netherlands

Sweden's greenhouse sector, though modest in size, is marked by strong structural organisation and significant economic importance. The industry's consolidation has fostered greater professionalism and investment, with productivity and capital intensity supporting horticulture's rising share of agricultural production value. Regional specialisation, particularly in Skåne, underlines the sector's strategic role in Sweden's food supply. Continuity prospects are improving, as indicated by the stabilisation of the average age among greenhouse managers. Overall, Swedish greenhouse horticulture stands out for its high value and increasing professionalisation, maintaining its relevance through continued investment, technological advancement and regional concentration.

Sweden: small in area, high in value per hectare

Sweden's horticultural sector has undergone faster structural change than agriculture overall, with fewer holdings and employees but a modest increase in cultivated area. In 2023, greenhouse production covered 281 hectares across professional holdings, a slight decline since 2020 but within normal fluctuation. Despite consolidation, greenhouse operations have expanded in scale: average greenhouse area per holding grew from just over 4,200 to nearly 4,600 m² between 2020 and 2023—representing a more than 75% increase since 1999. Growth is driven primarily by the largest producers increasing their capacity.

Skåne, Sweden's southernmost province, remains the core region for Swedish greenhouse horticulture. In 2023, it accounted for half of the country's total greenhouse area and horticultural workforce, despite hosting only one-third of all horticultural holdings. This regional concentration has remained stable over time, reinforcing Skåne's centrality in commercial greenhouse production.[9]

Sweden is divided into eight cultivation zones, from mild southern regions to harsher northern climates, which define outdoor growing conditions, underlining the potential of CEA to overcome climate constraints.[10]

Image 4 Inhabitants per county

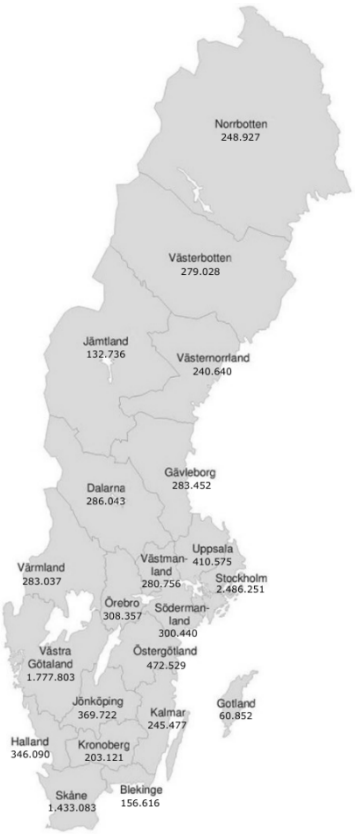
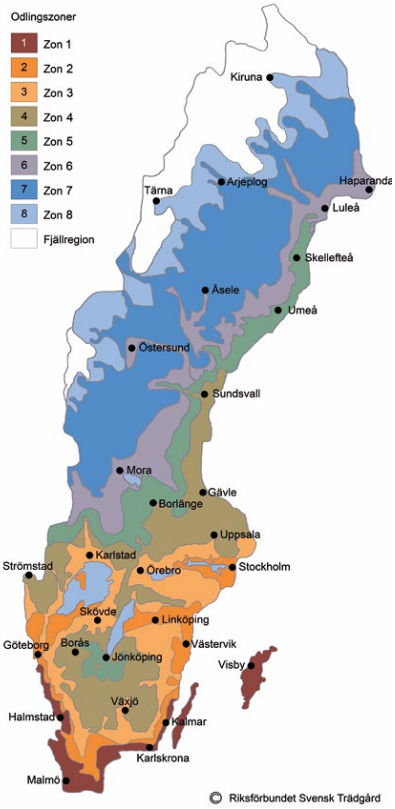


Image 5 Country parts Sweden

Image 6 Growing zones



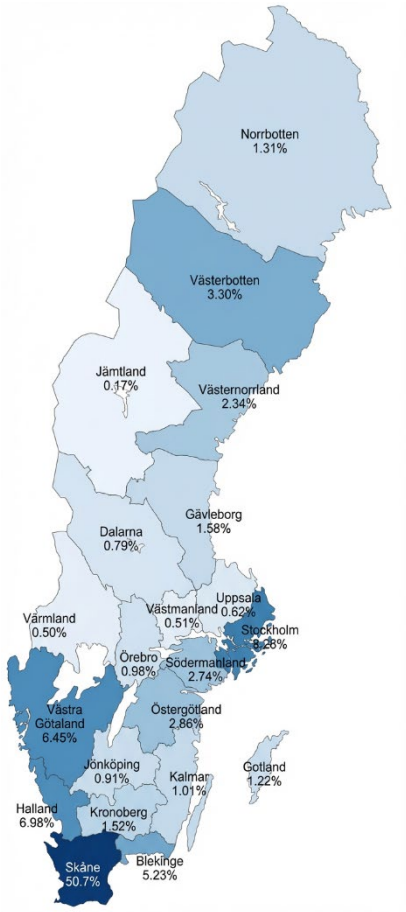
[9] Jordbruksverket on horticulture developments in Sweden

[10] Svensk Trädgård about cultivation zones

Table 5 Greenhouse area in Sweden and per county in hectares

	2017	2020	2023	% of total in 2023
Sweden total	286.1	290.9	280.9	100%
Stockholm county	22.8	23.4	23.3	8.28%
Uppsala county	1.8	1.8	1.7	0.62%
Södermanland county	6.0	5.6	7.7	2.74%
Östergötland county	9.5	8.7	8.0	2.86%
Jönköping county	2.4	2.5	2.6	0.91%
Kronoberg county	2.5	2.3	4.3	1.52%
Kalmar county	4.0	4.3	2.8	1.01%
Gotland county	3.3	3.1	3.4	1.22%
Blekinge county	14.0	13.0	14.7	5.23%
Skåne county	152.8	156.7	142.4	50.7%
Halland county	18.0	20.2	19.6	6.98%
Västra Götaland county	15.1	19.7	18.1	6.45%
Värmland county	3.3	2.3	1.4	0.50%
Örebro county	2.8	2.4	2.8	0.98%
Västmanland county	4.0	3.3	1.4	0.51%
Dalarna county	3.5	2.2	2.2	0.79%
Gävleborg county	4.1	3.4	4.4	1.58%
Västernorrland county	3.4	5.0	6.6	2.34%
Jämtland county	0.7	0.6	0.5	0.17%
Västerbotten county	7.6	6.7	9.3	3.30%
Norrbotten county	4.4	3.7	3.7	1.31%

Image 7 Illustration of table 5



Sweden's greenhouse horticulture continues to consolidate into fewer but larger companies. In 2023, 614 companies cultivated horticultural crops (not only vegetables) across 2.67 million m² of greenhouse area. The long-term reduction in the number of companies has driven substantial structural scaling, with average greenhouse size rising from 1,400 m² in 1971 to 4,400 m² in 2023. Growth has taken place primarily within the largest enterprises: 64% of all greenhouse area is now concentrated in companies exceeding 10,000 m². A structural challenge is the aging infrastructure. 71% of greenhouse area is 20+ years old in 2023, while only 6% has been built within the past five years. Regional patterns show Skåne dominating total area and new construction, though northern counties such as Västernorrland, Jämtland, Norrbotten and Västerbotten demonstrated recent expansion.

Energy use continues to decline in climate-intensive production. Total energy consumption fell 10% between 2020 and 2023, driven mainly by a slightly reduced cultivated area. Relative consumption remained stable at ~207 kWh/m², but the transition away from fossil fuels has been dramatic: fossil sources dropped from 78% of energy use in 2002 to just 7% in 2023. Renewable fuels now dominate, supported by widespread uptake of biomass, electricity and district heating.

Greenhouse technology adoption varies significantly by company size and crop type. Energy/shade screens covered over 70% of total area, recirculation systems reached 66% and growing lights covered 23%—with clear increases in adoption among larger holdings. Edible-crop producers generally have higher rates of modern equipment than ornamental producers.
Regarding plant protection, 74% of companies used some form of crop protection in 2023. Chemical products were used by 49%, macrobiological agents by 54% and microbiological solutions by 19%. Smaller holdings were considerably less likely to use plant protection compared to larger ones.[11]

[11] Jordbruksverket greenhouse horticulture data 2023

Comparative perspective

- Sweden features a large land area with a low population and focuses on high-value, climate-resilient, and energy-efficient greenhouse production, making it a strong testbed for regional food security and sustainable models.
- The Netherlands, despite its smaller size, has a high population and operates an ultra-intensive, highly productive greenhouse sector that leads globally in technology, exports and innovation; Dutch solutions often set the standard for controlled-environment agriculture.
- While Sweden admires Dutch expertise, there is some hesitation about large-scale models among smaller Swedish growers; Swedish consumers also demonstrate strong loyalty to local and seasonal produce, even at higher prices.

Fruit & vegetables account for the largest share of the food budget

The largest share of the Swedish food budget consists of fruit, nuts and vegetables, 17 percent or 5,476 SEK (512 EUR) per person per year.
However, sales per person for fruit, nuts and vegetables have only increased by 58 SEK (5.42 EUR) compared to 2023 per person.[12]
Within the fruit & vegetables category in the supermarket channel, 10.1% of the sales is organic of which 3.2% KRAV and 6.9% non-KRAV (the Swedish organic certification). Fruit and vegetables sales increased 3.4% in value in 2025 compared to 2024, while organic sales decreased by 1.9%.[13]

Consumers prefer Swedish produce when products are seasonally available.

"*National certifications such as KRAV and 'From Sweden' are considered more important market signals than EU organic labelling for imported herbs and greens.*"
Kristin Orrestig, CEO at Svegro.

Image 8 Swedish market share per product group in 2023 and indication of growth or decline compared to 2022.[14]

In the table below, relevant crops for horticulture including self-sufficiency goals and levels are shown.

Table 6 LRFs suggestion for self-sufficiency share in 2035 and the 2024 level[15]

Product group	Suggestion 2035	Level 2024
Cucumbers	70%	48%
Tomatoes	50%	20%
Strawberries	80%	68%

[12] SCB, food sales statistics 2024
[13] Swedish Grocery Trade, grocery index 2025
[14] From Sweden, self-sufficiency grade and consumption of Swedish produced food
[15] LRF on the Swedish production goals and self-sufficiency in the food strategy

2.2 Focus on Sweden's climate, infrastructure and self-sufficiency challenges

Northern Sweden's agricultural conditions are defined by a markedly colder climate and shorter growing season compared to the south. While low temperatures limit overall production volumes, they also reduce pest and disease pressure and enhance product quality, particularly the aroma, nutrient content and antioxidant levels in fruits, vegetables and wild berries. Extended daylight hours during summer further support high-quality crop development.

Agricultural production infrastructure is concentrated in southern Sweden, where climatic conditions favor large-scale horticulture, cereals and greenhouse-intensive sectors. In contrast, northern regions rely more on livestock, reindeer husbandry, forestry-linked products and wild berry collection. Sparse population density and long transport distances add structural constraints to northern food production and distribution.

These factors combine to create self-sufficiency challenges, specifically for Northern Sweden. The limited arable land base and climatic constraints restrict local production of fruits, vegetables and many field crops, increasing reliance on supply from southern Sweden or imports. However, the region benefits from strong natural assets—low pest pressure, high-quality wild berries and sustainable animal systems—which align with Sweden's national focus on organic production, animal welfare and environmentally responsible agriculture.[16]

Table 7 Sweden's food import value in 2024 for specific crops.

	Product group and top country	Million EUR	Million SEK
	**Tomatoes (fresh or chilled)**	**150**	**1,600**
	Spain	26	278
	The Netherlands	75	799
	France	32	341
	**Salad (fresh or chilled)**	**60**	**638**
	Spain	34	368
	Germany	6	68
	Italy	6	68
	**Cucumbers (fresh or chilled)**	**52**	**559**
	Spain	29	312
	The Netherlands	17	183
	**Bell pepper (fresh or chilled)**	**73**	**779**
	Spain	22	240
	The Netherlands	41	441

Source: Invest in Norrbotten & Jordbruksverket/ SCB

"For herbs and leafy greens, Sweden is currently considered less suitable due to domestic production, while crops such as tomatoes and cucumbers may offer better potential. Production in northern Sweden might feel more local, but centralised buying and transportation flows through central warehouses, do not always make it more efficient in transport. The hub for fruit, vegetables and flowers is in Helsingborg, where often both Swedish and imported goods are collected for further distribution to single stores by the retailers themselves."
Kristin Orrestig, CEO at Svegro.

"Modern greenhouse horticulture requires a high level of technical and socio-economic knowledge and input, with growers increasingly operating with a strong innovation mindset to best respond to current challenges."
Huub Kerckhoffs, Wageningen University & Research.

[16] Jordbruksverket, publication on Swedish food production

2.3 Relation to the Swedish food strategy

The follow-up to Sweden's Food Strategy is highly relevant for CEA companies, as it explicitly identifies structural weaknesses in the current food system that CEA is well positioned to address. The strategy emphasizes the need to strengthen Sweden's domestic food production capacity and resilience, particularly considering climate change, geopolitical uncertainty and supply-chain disruptions. CEA directly supports this objective by enabling stable, year-round production independent of seasonal and climatic variability.

The strategy also highlights increasing climate vulnerability and environmental pressures on conventional agriculture. In this context, CEA offers a controlled production environment that reduces exposure to weather extremes while improving resource efficiency. Identified regulatory bottlenecks further increase the likelihood of forthcoming reforms, potentially creating more favourable conditions for innovative production models such as CEA. In parallel, the strategy prioritizes innovation, digitalization and knowledge-intensive food systems—areas where CEA is inherently aligned through data-driven production, automation and advanced climate control.

Finally, the strategy underscores the need for more sustainable resource use, reduced food waste and cross-sectoral solutions linking food production with energy, urban development and national preparedness. CEA supports these goals by optimizing input use, minimizing losses and integrating efficiently with circular systems and energy infrastructure. Taken together, the updated Food Strategy provides clear policy momentum that strengthens the long-term relevance and strategic positioning of CEA within Sweden's food system transformation.

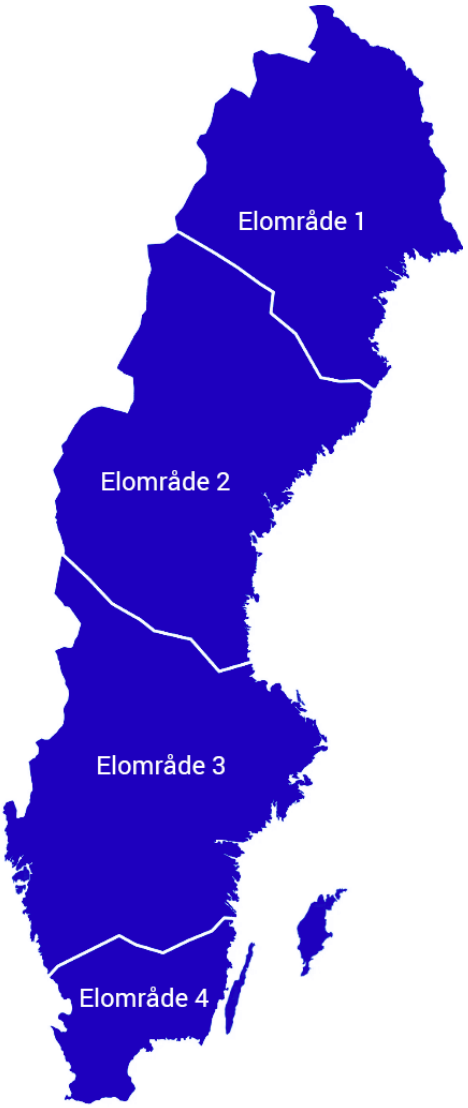
In a recent publication (March 2026), Jordbruksverket highlights northern Sweden as strategically important for resilient food production, noting declining output but strong assets in land, water and renewable energy, alongside longer growing seasons that enable new crops and expanded horticulture. The authority proposes strengthened investment and start-up support, higher national aid levels, and increased funding for research, innovation and food clusters adapted to northern conditions. Together, these measures aim to improve profitability, competitiveness and preparedness in the food system through coordinated action by the state, producers and industry.[17]

[17] Jordbruksverket on how Northern Sweden's food production needs to raise

3 Converting challenges to opportunities

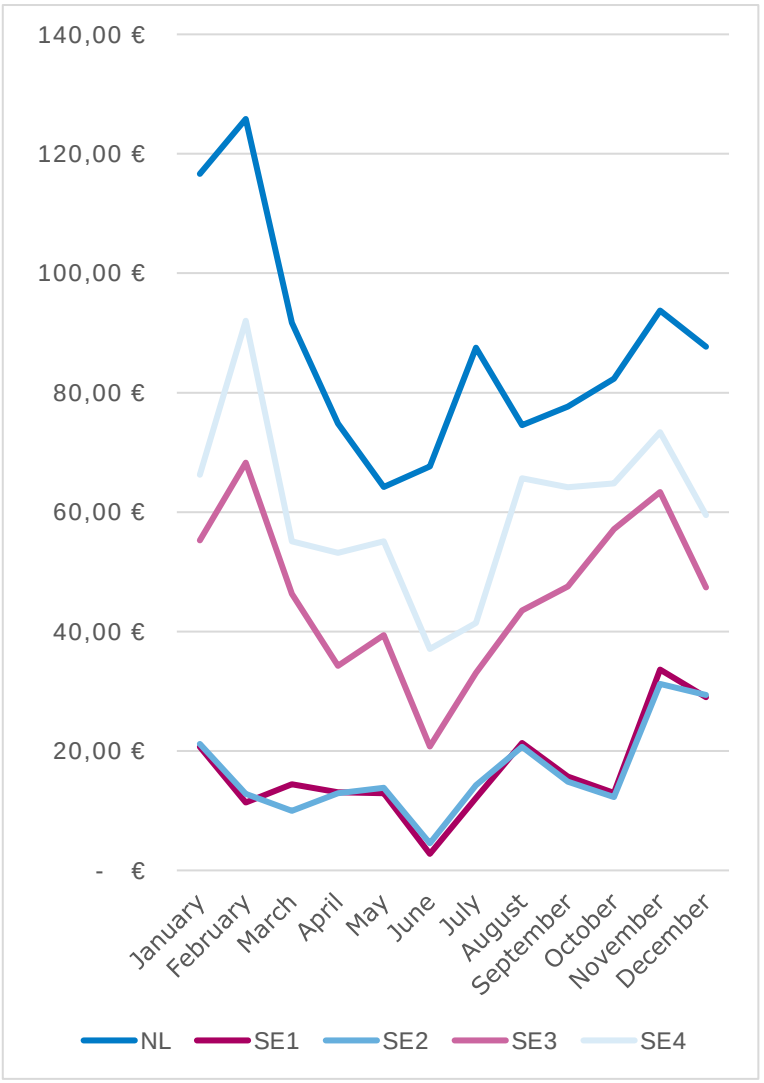
The government aims to stimulate active farming and increase food production across all of Sweden.
The new food strategy seeks to attract more young people and newcomers to the sector, enabling them to establish themselves as farmers, co-owners, or employees. A central priority is to build competitiveness and profitability, which are seen as the foundation for a more robust and resilient food system.
The policy will strengthen innovation, access to capital and productivity, increasing profitability and competitiveness while reducing climate and environmental impacts through smarter resource use.

Image 9 Electricity zones Sweden



Source: SCB

Table 8 Electricity prices comparison year 2025 in EUR



Source: Nord Pool Group

Sweden's electricity prices are structurally lower in the north (SE1–SE2), where hydropower and wind create a persistent surplus, while the south (SE3–SE4) faces higher prices due to high demand and limited grid capacity to transport excess power southwards.[18] By contrast, the Netherlands generally has higher and more volatile electricity prices nationwide because the grid is congested across much of the country, with insufficient transport capacity to balance growing solar and wind generation against demand.[19]

[18] Svenska Kraftnät about electricity zones and price differences

[19] IEA – grid congestion is posing challenges for energy security and transitions

3.1 Macro forces shaping the CEA market

The development of CEA in Northern Sweden is increasingly influenced by environmental constraints, financial feasibility and the evolving policy landscape. Together, these forces determine the extent to which CEA can strengthen food security, climate resilience, reduced import dependency, sustainable resource use and regional development.[20]

Environmental impacts

CEA offers clear environmental advantages that are highly relevant to regional and national policy objectives. Water consumption is consistently lower compared with conventional farming, primarily due to closed-loop irrigation systems. Many CEA respondents report using 90–99% less water than traditional agriculture, with hydroponic systems requiring as little as ~20 litres per kilogram of lettuce, compared to ~250 litres in open-field systems. For policymakers seeking to ensure long-term sustainable resource use and resilience to climate volatility, this efficiency provides a compelling rationale for CEA adoption.

Similarly, CEA significantly improves land-use efficiency. Vertical and hydroponic systems can produce over 40 kg/m² annually, compared with approximately 5 kg/m² in conventional systems. Enabling high-yield production in urban, industrial, or marginal spaces directly contributes to regional food self-sufficiency and supports broader spatial planning and regional development strategies.

However, high energy consumption remains the principal environmental drawback and a critical barrier to scaling. Vertical farms can consume more than seven times the energy per kilogram of produce than greenhouses, and hydroponic systems may use ~100,000 kJ/kg, compared to ~1,000 kJ/kg in conventional greenhouse systems. For Northern Sweden, which is rich in renewable power but exposed to price volatility, aligning CEA expansion with long-term renewable energy policy, grid investments and price-stability mechanisms is essential.

CEA systems also reduce or eliminate the need for pesticides and significantly minimize fertilizer runoff due to their enclosed growing environment. These features support public-health goals, extend shelf life, and reduce waste, strengthening the role of CEA in regional food-security planning.

Financial drivers and drawbacks

Despite strong environmental performance, the Chalmers study emphasizes that the main barriers to CEA adoption are financial rather than technical. High upfront investment costs, low food-sector margins and elevated operating costs—particularly electricity—limit profitability and slow scale-up. Stakeholders highlight long payback times and difficulty accessing capital as major obstacles, even where demand for local produce exists. Actors consistently report that competitive pricing relative to imported produce is necessary to secure retail shelf space, but this compresses margins throughout the value chain.

For policymakers, this highlights the importance of coordinating and adapting existing economic instruments. While Sweden offers innovation grants, energy-efficiency incentives and agricultural investment support, these instruments are largely fragmented and not specifically designed to address the capital intensity, long payback times and market risks associated with CEA. Without more targeted financing solutions—such as adapted loan instruments, durable risk-sharing mechanisms and support models that combine energy, food production and preparedness objectives—regional CEA ecosystems are likely to struggle to scale to a level that significantly reduces import dependency or strengthens food system resilience.

Public policies, subsidies and certifications

Current policy frameworks for CEA remain fragmented. While actors have received support through innovation agencies and energy-related subsidies, many perceive that CEA receives less support than conventional agriculture, particularly regarding energy costs. Moreover, under current EU organic rules,

[20] State of the CEA market - a qualitative evaluation of market development and operating actors' needs. Chalmers University of Technology, 2023

soilless CEA production cannot receive organic certification unless the crop naturally grows in water. This limits access to subsidies and excludes CEA products from a label that strongly influences consumer trust and price premiums.
Integrating CEA more explicitly into agricultural, food-security, and regional-development policies—alongside modernizing certification frameworks to reflect environmental performance—would remove key barriers to investment and accelerate the sector's contribution to sustainable regional food systems.

3.2 Challenges in Swedish resilient food production

Despite strong institutional capacity in research, innovation and policy coordination, Sweden's geography and climate continue to limit rapid expansion of open-field horticulture, particularly outside southern regions. These constraints are most pronounced in Northern Sweden, where short growing seasons, limited arable land, sparse population density and long transport distances increase dependence on external supply and reduce food system resilience.

For Northern Sweden in particular, CEA offers a pathway to strengthen regional food preparedness by decoupling production from local climatic and land constraints, while remaining consistent with national objectives on sustainability, innovation and resilience.

"Swedish regions want to start building clusters and cooperation structures like the Dutch but are less advanced within horticulture in how to approach this. While the foundational conditions—such as available land and access to green energy—are in place, their approach and execution are still less mature compared to the Dutch."

This insight was shared during an interview with Elzemieke Kok from Business Sweden, who supports Swedish and Dutch companies in cross-border expansion and conducts market studies in sectors including greenhouse horticulture.

She noted that although Sweden has land and green energy, regions struggle to initiate clusters and structured collaboration—creating a significant opportunity for Dutch expertise in ecosystem building.

Cluster capability is essential for greenhouse technology, CEA, food system resilience, innovation-driven production and supply-chain robustness.

Labour availability is a key challenge for Swedish greenhouse operations: workers willing to perform this type of work are already scarce, finding appropriately skilled staff is even more difficult. This is compounded by stricter labour regulations and higher wage levels than in countries such as the Netherlands, making it more challenging to build a competitive business case.

According to Kristin Orrestig from Svegro:
"Market entry for foreign greenhouse operators or technology providers requires clear added value, a proper business case, local partnerships and a strong understanding of existing production structures."

"The Swedish labour market is perceived as difficult since employment regulations are strict, and it is a challenge to find skilled and affordable staff. As a result, automation and digitalization are seen as promising opportunities." Mentioned Fleur Hoog Antink, from the Netherlands Enterprise Agency (RVO) in an interview.

3.2.1 Technical challenges

Light

Sweden's extreme seasonal variation in daylight is a defining parameter for greenhouse and CEA systems. In northern regions, winter daylight can drop to 0-3 hours per day, while summer brings continuous or near-continuous daylight through the Midnight Sun phenomenon. For horticulture, this creates a structural reliance on supplemental LED lighting during winter, directly increasing electricity demand and operating costs, while simultaneously enabling very high photosynthetic efficiency during summer months when natural light is abundant. From a CEA perspective, this makes light optimisation and adaptive lighting strategies critical: technologies that adjust light intensity and spectrum to crop needs and electricity price signals are particularly relevant for Sweden, where seasonal contrasts are more extreme than in continental Europe.

CO_2

CO_2 enrichment is a well-established productivity lever in greenhouse horticulture, but its deployment in Sweden is closely linked to energy and heat systems. In colder climates, CO_2 availability is often tied to combustion-based heat generation or industrial by-streams, making integrated energy–CO_2 solutions especially relevant for CEA operators. As Sweden advances toward fossil-free energy systems, interest is increasing in alternative CO_2 sources and closed-loop solutions that maintain yield gains without increasing climate impact.

For innovative CEA SMEs, this reinforces the importance of designing systems where CO_2 supply, heat recovery and climate control are treated as a single operational system, rather than as standalone inputs.

Energy

Energy is a decisive factor for greenhouse production in Sweden, particularly during winter when heating and lighting demand peak simultaneously. Swedish electricity prices are seasonally higher in winter and lower in summer and they vary significantly across the country's four electricity bidding zones (SE1–SE4) due to grid constraints and generation patterns, while the north is also hosting growing renewable generation capacity. At the same time, national electricity demand is expected to rise substantially due to industrial electrification, increasing competition for power during peak periods. For CEA operators, this reinforces the relevance of energy-efficient designs, flexible demand management and hybrid energy solutions that can respond to price volatility and grid conditions.

As noted by industry actors, greenhouse production in Sweden must therefore be evaluated not only on absolute energy consumption, but on when and where energy is used and how well systems can adapt to fluctuating prices and availability.

Dutch expertise in greenhouse building and precision agriculture is recognised by Swedish municipalities. *"Swedish municipalities are actively seeking to attract Dutch companies and talent to participate in local food production initiatives."* Mentioned Laura Redmond, Arctic Food Arena.

"Many of the innovative SMEs we work with have energy saving solutions; the key is understanding the fit of these technologies in the Swedish market." Tiffany Meijer from InnovationQuarter and Rotterdam Partners in the Netherlands, mentioned that many innovative SMEs have energy solutions and exploring their fit in Sweden's greenhouse sector, which is the backbone of a resilient production model in colder climates.

Circularity

Circularity is increasingly embedded in Swedish food and energy policy and aligns closely with CEA system design. Greenhouse and controlled environments enable recirculation of water and nutrients, reuse of waste heat and integration with local energy and industrial systems—reducing losses and improving overall resource efficiency. In a Swedish context, circular approaches also support resilience by lowering dependency on external inputs during periods of supply disruption or price spikes. This positions CEA not only as a production technology, but as part of a broader circular infrastructure, linking food production, energy systems and regional development—particularly in colder climates where efficiency margins are critical.

3.3 Trends and developments from a consumer and trade perspective

Sweden's major grocery retailers Axfood, ICA, and Coop are all accelerating efforts to offer sustainable, climate-smart and locally produced food, creating strong market pull factors for local suppliers.

Axfood positions itself as a key driver of a more sustainable Swedish food system by 2030, with sustainability integrated into strategic decision-making and a clear commitment to building a long-term sustainable food chain. This includes closer collaboration with suppliers to improve environmental performance across categories.[21]
ICA aims to reduce climate impact in line with the Paris Agreement and has set SBTi-approved net-zero targets across its value chain by 2050. The retailer's Ambition 2030 strategy emphasizes making sustainable choices easier for customers and prioritizes emissions reductions in product supply chains.[22]
Coop highlights Swedish and locally grown food as part of its core sustainability positioning, and provides transparency to consumers via its Sustainability Declaration, which evaluates products across ten environmental and social parameters (e.g., biodiversity, climate, water).[23]

On another note, Laura Redmond explains the emerging industrial ecosystem in northern Sweden, where data centres, hydrogen-based steel plants (LKAB / Hybrit) and similar projects generate large volumes of recoverable heat suitable for horticulture. This illustrates how Swedish industrial transformation aligns with Dutch greenhouse technology capabilities. *"Waste heat from data centers and green hydrogen steel production projects in northern Sweden presents a significant opportunity for greenhouse food production."*

3.4 Connecting Swedish opportunities to Dutch solutions

"Sweden sees much value in Dutch innovations in greenhouse horticulture." This quote comes from an interview with Lennart Knot from FoodVentures, a company involved in the Swedish tomato greenhouse project in Frövi, discussing how Swedish stakeholders perceive Dutch horticultural innovation.

3.4.1 Opportunities

The most realistic opportunities in Northern Sweden are not large-scale, turn-key greenhouse projects built from scratch, but rather:

- Energy-integrated greenhouse systems using local renewable energy and industrial waste heat, such as the WA3RM project mentioned later in the report.
- Automation and digital solutions to reduce labour dependency
- Pilot projects in Northern Sweden to showcase Dutch technologies in practise, such as participation in research project with regions, municipalities, universities and local producers.
- Modernization and upgrading of existing greenhouse infrastructure
- Cluster development and knowledge transfer to support regional innovation and enabling growers to increase usable production periods and volumes, to make advantage of climate change in the best possible way and increase variety of self-sufficiency foods.
- Adapting technology to extreme climatic conditions.

As Kristin from Svegro mentioned regarding advantages of greenhouse growing in Sweden:
"Proximity to consumers, short supply chains and predictable logistics are key advantages of greenhouse production in Sweden compared to imports. During the summer season, favourable daylight conditions significantly reduce the need for additional heating and lighting, improving energy efficiency. Energy prices are relatively stable when contracted for longer-term and not the main cost driver. Labour remains the largest cost factor in Swedish greenhouse production."

[21] Axfoods sustainability strategy
[22] ICA Gruppen strategies and targets for sustainability
[23] COOP's sustainability work

In Sweden, there are already conducted some studies on using waste heat from data centers to greenhouses. For example, Luleå University of Technology published an article about previous research with Vattenfall and the municipality of Boden in collaboration with RI-SE, financed by Vinnova[24] as well as an article about energy efficient greenhouse cultivation in the North in collaboration with Norrskenstomat and Hietala Handelsträdgård.[25]

Recently, the publication 'Is there enough food?', gives an analysis of Sweden's nutritional self-sufficiency and is published by Stockholm Resilience Centre from Stockholms University.[26]

The conclusions summarized:

- Sweden produces well above basic needs for energy, protein and fat in a normal year
- Low self-sufficiency figures mainly reflect product mix and consumption patterns, not risk of hunger
- Import disruptions would reduce variety, not basic nutritional adequacy

Around the same time, another report about green upscaling as a growth agenda for Swedish agriculture and food production was published by Livsmedelsföretagen.[27]
The report sets out a shared agenda for sustainable growth in Swedish agriculture and food production, strengthening food security, competitiveness, and resilience through coordinated action across the entire value chain.

Interview with Hans Hietala from Hietala Handelsträdgård
Hietala Handelsträdgård has recently invested in upgrading its physical assets, including replacing the greenhouse roof over approximately **6,000 m²**, effectively resulting in near-new greenhouse structures. This underlines that parts of the existing greenhouse stock in Northern Sweden are technically viable but in need of targeted upgrades, rather than full replacement.

During winter, the lack of natural light necessitates extensive use of artificial lighting, which significantly increases energy consumption. Technically, greenhouses must be designed to withstand temperature fluctuations ranging from approximately +35°C in summer to –40°C in winter, requiring oversized and costly heating systems.
Snow load is a major structural constraint. Greenhouses must be built to carry heavy snow, which increases construction costs and often leads to the use of reinforced structures and plastic coverings. These, in turn, reduce light transmission compared to modern glass greenhouses in milder climates.
Additional infrastructure is required, such as heated garages for tractors and vehicles, further increasing fixed costs.
Certifications and compliance requirements increasingly demand additional time and resources. Although these are obligatory for specific sales channels or clients, they generally do not influence product pricing and are often perceived as challenging, particularly during the harvest season when operational priorities shift toward harvesting crops.
As a result, growers must sell at relatively high prices to cover fixed costs, while the market remains highly price-focused. Quality alone is not sufficient to justify price premiums in centralised retail systems.

Distribution routes are complex and inefficient. Products may be sold directly to local stores via wholesalers or are transported over long distances (e.g. via terminals in southern Sweden such as Helsingborg), adding cost and reducing competitiveness.

[24] Greenhouse at data center
[25] Energy efficient greenhouse cultivation in the North
[26] Report about self-sufficiency
[27] The report: 'Grön uppväxling'

4 Competitive & collaborative landscape

Within the Swedish agri-food innovation landscape, Agtech Sweden primarily contributes expertise in agricultural technology for outdoor production systems, while also having some relevant projects in greenhouse-related innovation. This includes AI-based plant monitoring solutions and early-stage project concepts for circular heat and nutrient recirculation, positioning Agtech Sweden as a complementary partner in collaborative initiatives rather than a dedicated greenhouse actor.[28]
"Most established producers already have long-standing relationships with technical and technology providers from e.g. the Netherlands, making the greenhouse ecosystem relatively closed to new, standalone solutions. In southern and central Sweden, the greenhouse ecosystem is mature, with established players, suppliers and networks already in place." mentioned Kristin at Svegro.

Image 10 Potted basil in one of Svegro's greenhouses

LRF Trädgård (the Swedish Farmers Association, specifically for vegetables, fruits and flowers), represents the Swedish horticultural sector within LRF and has defined sustainability objectives covering environmental, economic and social dimensions. The sector has already achieved significant progress, including major reductions in energy use and fossil fuel dependency in greenhouse production, alongside continued growth in output. Building on this, LRF Trädgård aims to phase out fossil fuels from horticultural value chains by 2035, while ensuring access to sustainable plant protection methods and tools that support biodiversity in a competitive way. The objectives also emphasise improved policy stability, reduced regulatory burden and maintaining horticulture as an attractive sector for businesses and skilled labour.[29]

[28] Agtech Swedens website
[29] LRF sustainability goals

4.1 Networks, events, sector associations and government initiatives

Industry perspective from Head of LRF Trädgård Anki Cronberg

Insights from LRF Trädgård confirm that the main constraints facing Swedish horticultural producers are not technical feasibility, but labour availability, energy costs and limited financial capacity for large-scale modernisation. While the need for investment is widely recognised, many companies lack the balance sheet strength to carry major upgrades independently and banks are often cautious—particularly in capital-intensive greenhouse projects.

From a solutions perspective, LRF Trädgård highlights a clear differentiation in needs across production systems: automation and robotics are particularly relevant in berry and open-field production with high labour intensity, while greenhouse producers prioritise energy efficiency, smart control systems and technical modernisation. In this context, collaboration with specialised technology suppliers—especially from the Netherlands—is seen as highly valuable.

For Northern Sweden, LRF Trädgård does not identify large-scale horticultural expansion as the primary pathway but rather points to strong potential for pilot projects and testbeds. Long daylight periods, low pest pressure and an innovation-driven industrial environment create favourable conditions for developing and validating cold-climate-adapted greenhouse concepts, energy-efficient systems and automated production models, despite ongoing constraints related to logistics and labour availability.

Relevant knowledge and research environments in Northern Sweden include RISE, the Swedish University of Agricultural Sciences (SLU) in Umeå, and Luleå University of Technology (LTU), which together provide applied research, testing capacity and systems expertise relevant to cold-climate horticulture and controlled environment agriculture.

WA3RM was the original project developer for Frövi Greenery and initially served as a connector among several parties, later selling the project.[30] The Frövi production site is a member of Svenska Odlarlaget, an economic association fully owned by Swedish berry, fruit, and vegetable growers. Founded in 1992, Odlarlaget is a leader in greenhouse vegetable cultivation in Sweden, focusing on sustainable transformation through locally produced growth and environmentally smart, heated greenhouses with lighting for year-round production.[31] Since 2026, Svenska Odlarlagets members are member of LRF Trädgård.[32]

Regenergy Frövi reuses industrial waste heat from a carton board factory to produce tomatoes in greenhouses. This contributes to increased self-sufficiency, less transports and new jobs.

"Energy is a crucial factor for greenhouse production in Sweden, especially due to the high energy demand in winter and regional differences in electricity prices." Lennart Knot, FoodVentures.

Image 11 Tomato greenhouse Frövi
Source: WA3RM project Regenergy Frövi

[30] WA3RM project Regenergy Frövi
[31] Odlarlaget website
[32] News item about Svenska Odlarlaget members joining LRF Trädgård's membership

Invest in Norrbotten is the official regional investment promotion agency for Sweden's northernmost region, working as a coordinating and supporting hub that connects international investors with concrete business opportunities in sectors such as energy, foodtech, green transition, space and tourism, in close partnership with Business Sweden. It is a relevant network and investment relationship because it offers direct access to a rapidly growing, green-industrial ecosystem with strong public–private collaboration, low-cost renewable energy, and a trusted regional network that lowers entry barriers and accelerates establishment and scaling in Northern Sweden.[33]

Demo North is an initiative and summit founded and operated by Invest in Norrbotten that showcases Northern Sweden as a live testbed for the green and resilient transition, bringing together business, investors, government and academia around areas such as energy, food systems, advanced materials, defence and societal resilience.

For the audience of this market study, Demo North is relevant because it functions as a concentrated entry point to the regional ecosystem. The summit is offering direct insight, connections and due-diligence-level understanding of where capital, innovation and partnerships are actively forming in Norrbotten. The upcoming edition is on September 22 and 23, 2026. Some of the key topics are about energy, resilient food systems, community building for change and include field visits to innovation hubs, test environments and industrial transformation projects.[34]

Arctic Food Arena is a regional innovation and collaboration platform based in Northern Sweden, focused on exploring and enabling diversified circular food production in an Arctic context. The initiative brings together industry, researchers, public actors and entrepreneurs to assess how residual streams from the green industrial transition—such as excess heat and other by-products from fossil-free steel, mining and energy production—can be used in CEA and other food production systems. Arctic Food Arena functions as a knowledge hub, network builder and testbed facilitator, supporting feasibility studies, pilot projects and cross-sector collaboration aimed at strengthening food security, sustainability and commercial viability in the north of Sweden. The initiative is led by Business Region Gällivare and co-financed by regional and European development funds.[35]

4.1.1 Importance of partnerships, participation and networking

Successful market entry into Sweden's horticulture and agritech sectors relies heavily on strong partnerships, active participation in local ecosystems, and sustained networking. Sweden's investment and innovation landscape is built around collaboration, where both public and private stakeholders expect foreign companies to engage in long-term, trust-based relationships. This is particularly important because the sector's financing and innovation pathways are shaped by professional growers, who form the core of the country's horticultural production base and continue to invest in modernisation and technical upgrades. To interact effectively with this group, foreign companies benefit from local partners who understand regional climatic conditions, regulatory frameworks and the operational priorities of Swedish producers.

[33] Invest in Norbotten - foodtech

[34] Demo North Summit 2026

[35] Arctic Food Arena

4.2 Business culture

Swedish business culture is defined by low hierarchy, consensus-driven decision-making and long-term relationship building, which strongly shapes how foreign horticulture and AgriTech companies should approach the market. Stakeholders in Sweden—whether growers, municipalities, retailers or technology adopters—expect partners to be transparent, data-driven and modest in communication, valuing factual evidence over commercial hyperbole. Meetings are structured, punctual and prepared, with clear agendas and follow-up actions; this is particularly important in AgriTech and CEA where technical validation, sustainability metrics and operational reliability are essential for trust.

While retail remains the dominant channel for Swedish producers of greenhouse crops, such as Svegro, foodservice is generally approached as a secondary channel due to longer buying processes. When a wholesaler is content with their supplier(s) they are not likely to change. Decision processes can appear slow due to the strong emphasis on consultation and risk minimisation, but once alignment is reached, Swedish partners tend to be highly committed and reliable over the long term.
Collaboration is preferred over aggressive sales, and foreign companies are expected to demonstrate local relevance, such as adapting technology to Swedish climate conditions, complying with environmental frameworks and showing willingness to co-develop solutions with Swedish growers, research institutes or municipalities.

Networking works best through sector clusters, innovation hubs and pilot projects, where credibility is built through performance rather than persuasion. For Dutch companies, success depends on combining technical excellence with a respectful, partnership-focused approach aligned with Sweden's sustainability-first mindset.

"The Swedish horticulture market is perceived by Dutch companies as relatively closed, making it difficult for newcomers to enter." Fleur Hoog Antink, RVO.

4.3 Financing & grants

Investment appetite is reinforced by a vibrant Nordic Venture Capital ecosystem, where Swedish funds such as Almi Invest, Industrifonden, Norrsken VC, and others participate actively in agri-tech and climate-tech, with more than 50 Sweden-based agtech-focused investors identified in 2026[36], alongside Nordic horticulture investors like EQT Group and Yara Growth Ventures operating regionally.[37]

Commercial banks play a role in financing but are complemented by Kommuninvest, the municipal funding agency issuing green bonds that support climate-aligned local infrastructure—including energy-efficient systems relevant to greenhouse operations—and has built a green loan project portfolio approaching SEK 25 billion while financing more than 130 municipal projects.[38]

Swedish government incentives further enable sectoral growth: the Green Industry Leap (Industriklivet) provides grants covering 25–100% of costs for R&D, feasibility studies and industrial investments aimed at reducing emissions, with applications managed through the Swedish Energy Agency.[39]

The Climate Leap (Klimatklivet) offers easily accessible regional grants for companies and municipalities carrying out CO_2-reducing measures, including energy-efficiency adaptations relevant to horticulture.[40] Additional structural support comes from Sweden's CAP Strategic Plan (2023–27), which includes horticulture within its competitiveness, sustainability, and rural-development objectives under EU agricultural policy.[41]

While none of these programmes explicitly require a Swedish partner, applications must typically be submitted by a Swedish entity and are strengthened by demonstrating long-term local presence—meaning partnerships, subsidiaries or local integrators significantly improve feasibility and success rates.
Overall, the evidence shows that Sweden channels substantial real capital into climate-aligned and innovation-driven food production, supported by the multi-billion-krona scale of green financing frameworks, active VC participation, and structured national incentive programmes.

Governmental investment support mainly targets increased competitiveness, diversification beyond traditional farming, robust and resilient primary production, environmental and climate measures (such as reduced emissions and efficient nutrient use), food processing, and joint investments by fruit and vegetable producer organizations.[42]

The Swedish government has decided to strengthen investment support for farmers in northern Sweden (Västernorrland, Jämtland, Västerbotten and Norrbotten) to improve the competitiveness of agricultural businesses. The proposed changes increase the support rate from 30% to 40% of eligible costs and raise the maximum grant from 3.5 million SEK (327,000 EUR) to 4.7 million SEK (439,000 EUR), for example to enable investments in farm buildings such as barns.

[36] Shizune, top 50 agtech startup investors in Sweden
[37] Inven, horticulture investors in the Nordics
[38] UN climate change on Swedish local government investments projects
[39] Business Sweden, a guide and overview with incentives for companies looking to invest in Sweden
[40] Verksamt, sustainable business grants
[41] Swedens CAP strategic plan
[42] Jordbruksverket on types of investment support for the agricultural sector

5 Conclusions

Sweden stands out as a strategically aligned partner market for Dutch Controlled Environment Agriculture expertise, offering fertile ground for collaboration that advances both countries' national objectives in food security and sustainable innovation.

Northern Sweden offers concrete opportunities for Dutch SMEs providing greenhouse solutions, especially those in controlled environment agriculture. Recent increases in investment support and grant ceilings improve the financial outlook, but market entry is competitive and requires careful planning.
Swedish partners expect credible, tailored propositions and a visible commitment to local goals. Success relies less on enthusiasm and more on practical integration—through pilot projects, adaptation to regional conditions, and clear alignment with Sweden's sustainability targets. Navigating research projects and programmes is advantageous, but not always the fastest track.

5.1 Recommendations

1. **Focus on pilot-driven entry.** Real-world demonstrations help Dutch SMEs build credibility, adapt offerings, and meet local standards. Pilots also increase eligibility for public funding and encourage wider adoption.
2. **Align with policy and funding instruments.** Ensure your projects fit within Sweden's green financing frameworks and sustainability objectives. Eligibility for grants depends on local integration and alignment with policy goals.
3. **Pursue scalable solutions and knowledge exchange.** Develop innovations that can be expanded across Sweden and adapted for other Nordic markets. Ongoing collaboration in R&D and innovation hubs keeps your offering relevant and competitive.
4. **Prioritise measurable impact.** Demonstrate how your solutions contribute to resource efficiency, emissions reduction, and rural development. This strengthens your case for support and aligns with Swedish priorities.
5. **Prepare thoroughly before a trade visit.** Invest time in understanding the local market and identifying relevant stakeholders. Advance planning maximizes the value of trade missions and lays the foundation for meaningful connections.
6. **Leverage embassy and local partners for introductions.** Companies without an established presence in Sweden benefit significantly from institutional support. The Dutch Embassy, RVO, or trusted Swedish partners can facilitate access to networks, provide regulatory guidance, and help bridge cultural gaps.

With realistic preparation, local partnerships and informed market strategies, Dutch SMEs can navigate the Northern-Swedish greenhouse sector and unlock new opportunities for sustainable growth.

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