

Denmark – a Food and Farming Country

# Facts & Figures

Danish Agriculture  
& Food Council



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# 1. Denmark – a Food and Farming Country

22%

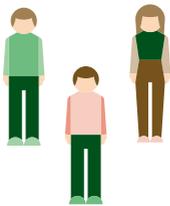


The agricultural sector contributes by 22% to the total Danish export of goods, with Germany, Sweden, the UK and China as the main markets and pork, fish and dairy as the main products.

Denmark has a temperate climate with plenty of rain, a flat landscape, and fertile soils. These are ideal conditions for agriculture. 61% of Denmark's total area is cultivated. The farms are large, with an average size of 83 ha. However, more than 20% of the farms exceed 100 ha of land. Many farms produce crops, but a large proportion have livestock, and especially meat and dairy products are main export goods from Danish agriculture.

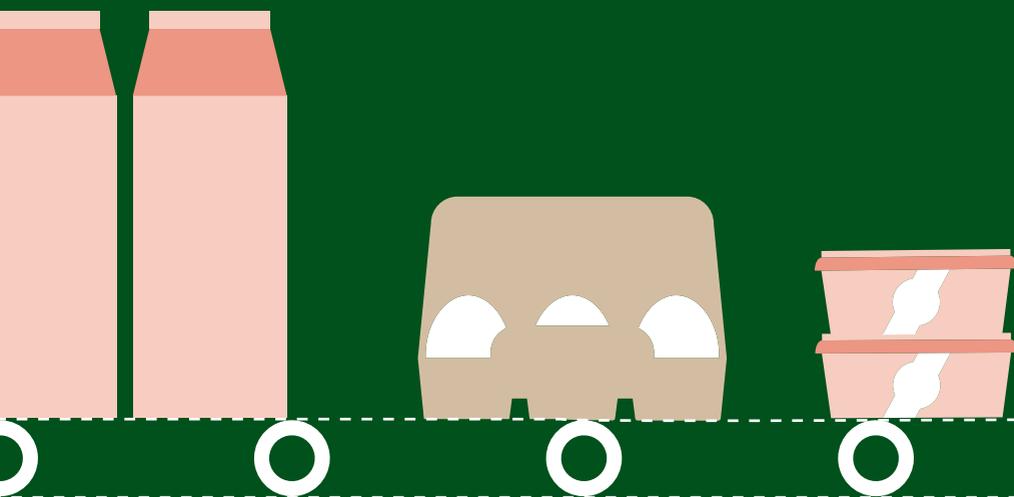
The dominating field crops are cereals. Most of the cereals, 85%, are used for animal feed. The most produced animals are pigs, cattle, and chicken. In Denmark, food production is transparent, and all products and ingredients are fully traceable. This ensures outstanding food safety. The production is efficient with low use of resources, and the environmental footprint is therefore small. Animal welfare is another focus point. This ensures healthy animals that thrive and deliver products of premium quality.

Denmark has a population of 5.8 million inhabitants. However, the food production is high enough to feed 15 million people, a feature that shows the high productivity of the Danish agricultural production. Due to this excess production most products are exported. The agricultural sector contributes by 22% to the total Danish export of goods, with Germany, Sweden, the UK and China as the main markets and pork, fish and dairy as the main products.



Denmark has a population of 5.8 million inhabitants. However, the food production is high enough to feed 15 million people.





The Danish food cluster focuses much on incorporating sustainable development into all aspects of production.

This high Danish productivity is due to a number of reasons:

- The farmers are well educated.
- There are intensive research and innovation in both the public and the private sector, and a strong tradition for public-private partnerships.
- The major food enterprises are farmer owned co-operatives. This implies a fast response in adapting to new market conditions, all the way from primary production to consumer, if e.g. legislation or consumer demands change.
- Knowledge transfer within the value chain is efficient and farmers find it natural to share their experience. They regard other farmers as colleagues rather than competitors.
- Profits from the value chain are returned to the farmers through the co-operatives which give farmers an incentive to improve their effectiveness.

Organic production is increasing globally. Denmark is a main driver behind this development. Danish consumers consume more organic produce than any other Europeans, and 30% of the Danish milk consumption is organic. Around 12% of Danish farmland is cultivated organically.

The Danish food and agricultural sector focuses much on incorporating sustainable development into all aspects of production. This means high climatic and environmental awareness and focus on animal welfare and social wellbeing, while at the same time maintaining a productive and efficient sector. Many initiatives have been launched to combat global challenges, guided by the UN Sustainable Development Goals (SDGs).

## 2. Sustainability and Climate

17%



Strong efforts by a partnership between the Danish food cluster, retailers, consumer organisations and authorities to prevent food waste has over a five-year period reduced food waste by 17%.

# UN Sustainable Development Goals

In 2015 all United Nations (UN) member states adopted the 2030 Agenda for Sustainable Development. At its heart are the 17 Sustainable Development Goals, which provide a shared blueprint for peace and prosperity for people and the planet, now and in the future. A sustainable agriculture and food sector will be essential in order to achieve the SDGs.

By having one of the world's most resource effective and climate efficient food productions, the Danish food cluster has a strong position for contributing to achieve the UN SDGs. Danish food products and solutions are increasingly produced for the international markets, and while the overall production over the last 25 years has increased, the environmental footprint of the production has been falling. This is due to the innovative green solutions and the way the cluster intensively works with achieving the SDGs.

## SDGs in Practice

The Danish food cluster is able to showcase a vast number of cases on its work with the SDGs. These include projects on how to find new protein sources, research into improved feed utilisation, development of new systems for the use of biomass, implementation of systems for reduced CO<sub>2</sub> emissions and water use in the production process, reuse of by-products as input for new products, machinery driven by green sources of energy, as well as concrete partnerships for sustainable and fair dairy production in Africa and Southeast Asia.



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# 2050

The Danish food cluster has set out an ambitious vision of becoming climate neutral by 2050.

## Climate

In 2050 the world population is expected to be around 10 billion people, implying an enormous increase in the demand for all types of food. At the same time the temperature is rising, the weather is getting more extreme and the biodiversity is decreasing faster than ever before. Production of food has a substantial climate footprint, and it is therefore fundamental to develop new innovative solutions which both allow for feeding a growing population and for dealing with the global climate challenge.

To address this complex issue the Danish food cluster has set out an ambitious vision of becoming climate neutral by 2050 with the same level of production of food or higher. This means that the sector cannot emit more greenhouse gasses than it absorbs. It will be a complex task as the emissions from food production are biological emissions that cannot be removed in one stroke.

In a close partnership with the Danish authorities, research institutions, organisations and other stakeholders and in agreement with the UN's Sustainable Development Goals Danish agriculture will show an economic and sustainable way to achieve a climate neutral food production.

## Climate Solutions with a Global Effect

Denmark's total emission of greenhouse gasses makes up 0.1 pct. of the world's total greenhouse gas emissions. However, the Danish food- and agriculture industry can create a much higher climate impact globally. In March 2021, the Danish Agriculture & Food Council established the Global Climate Task Force which focuses on tapping

into the vast potential of Danish companies to develop and supply climate-friendly and eco-friendly solutions for food and agricultural production worldwide. The task force consists of 10 leading companies from the Danish food cluster. We must learn how to produce more food and reduce our climate and environmental impact at the same time and use less space in the process. Denmark is a small country, but companies from the agro-food cluster can be crucial players in this context and make a big difference globally. Danish technology and know-how can contribute to a far more climate-friendly food production all over the world.

## Food Waste

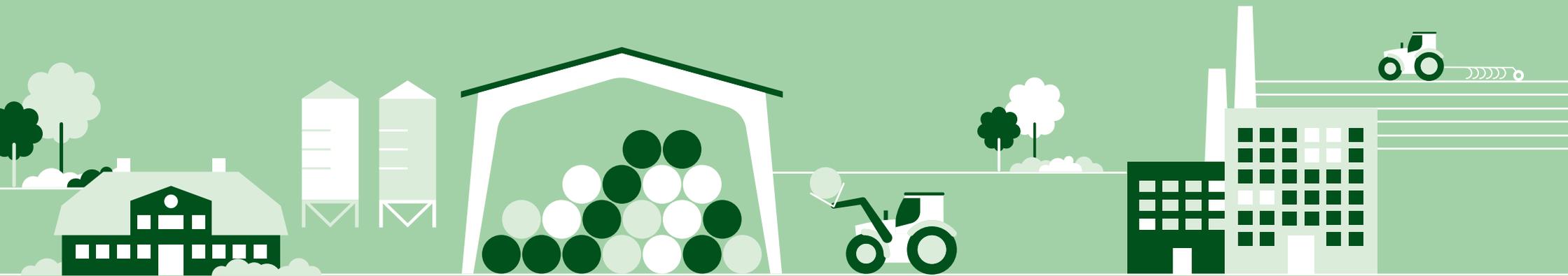
Strong efforts by a partnership between the Danish food cluster, retailers, consumer organisations and authorities to prevent food waste has over a five-year period (2017-2021) reduced food waste by 17%. At the same time a bio-waste collection scheme has proven very successful: Food waste from private household kitchens as well as from commercial and public canteens and restaurants is collected across the country. It is then processed into biogas and manure which can be used in the fields, thus completing the recirculation of biological material.



Food waste has been reduced by 17% over the last five-year period.



### 3. Based on Co-Operatives and Learning



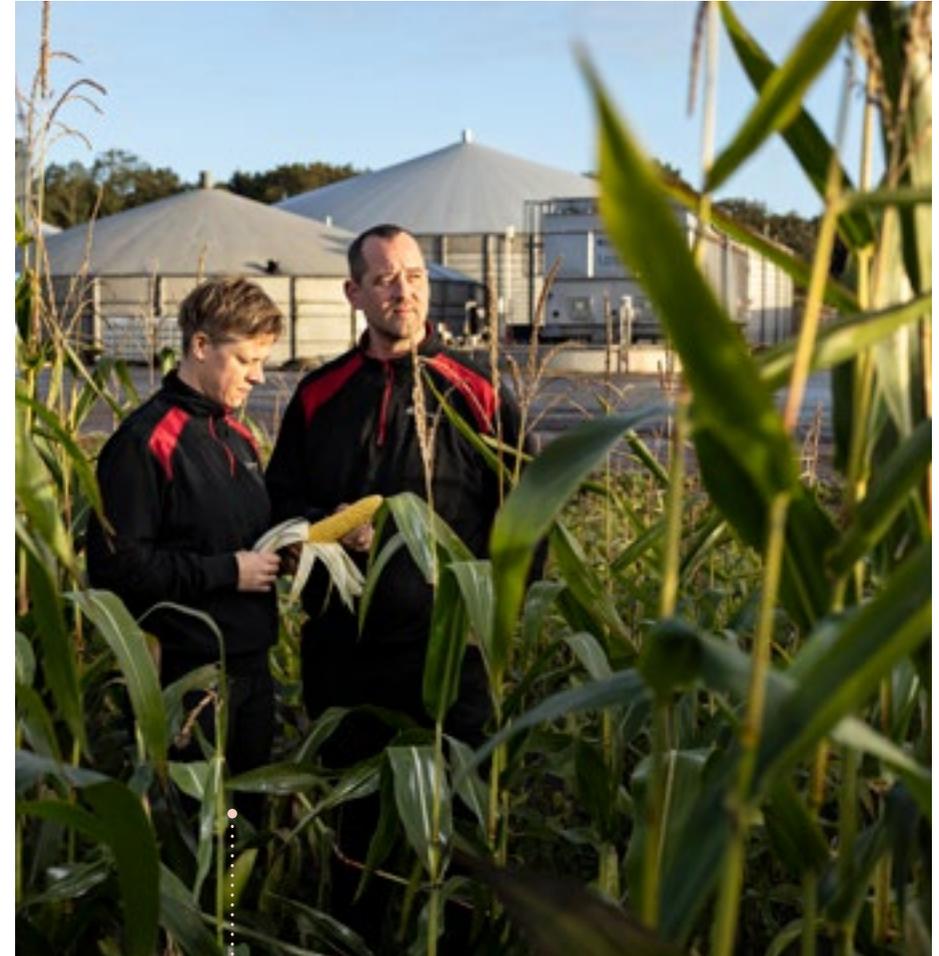
The Danish food sector is characterised by its ability to innovate.

## Co-operatives the Danish Way

The Danish food cluster and its way to operate rest heavily on the co-operative tradition. The major food enterprises in Denmark are farmer owned co-operatives. With today's professional daily management, they are among the world's largest exporters of safe, high-quality food and agricultural products. Profits are returned to the owners – the farmers. It is voluntary to join a co-operative, and the companies are controlled by the members. The basic principle is “one farmer - one vote”, irrespective of farm size and production volume. This setup has led to the integration of the value chains within the entire food cluster, from farm to fork and has therefore promoted transparency, traceability, food security and innovation.

The first co-operatives were founded in the late 19th century, and they revolutionised the Danish agricultural sector. It started with dairies: A single farmer with one or only few cows could not produce butter and cheese of acceptable quality by himself. By uniting, it was possible to build proper dairies with modern equipment and hire skilled dairymen. The result was high quality dairy products, sold at premium prices. Soon after, co-operative abattoirs and farm supply companies followed, with the same positive effects.

Over the last 50 years, a significant consolidation among co-operatives has taken place, merging small companies into large operators.



From farm to final product, farmers are colleagues rather than competitors.



## Education, Innovation and Knowledge Sharing

The Danish food sector is characterised by its ability to innovate. Measured by new patents, product development and re-investment in research, Danish food companies are in the European elite. This position is built on education, knowledge sharing and co-operation. SEGES Innovation, the knowledge centre of Danish agriculture, facilitates much of the innovation work within the sector.

The level of education is high in Denmark. Becoming a trained farmer takes from two and up to six years. It is necessary to be well educated to manage a large farm professionally. However, education also generates knowledge transfer. Farmers are innovative and therefore they understand and can easily implement new systems and solutions.

From farm to final product, farmers are colleagues rather than competitors. This is important in order to adjust swiftly to new consumer demands or changes in regulations.



The Danish food sector is characterised by its ability to innovate.

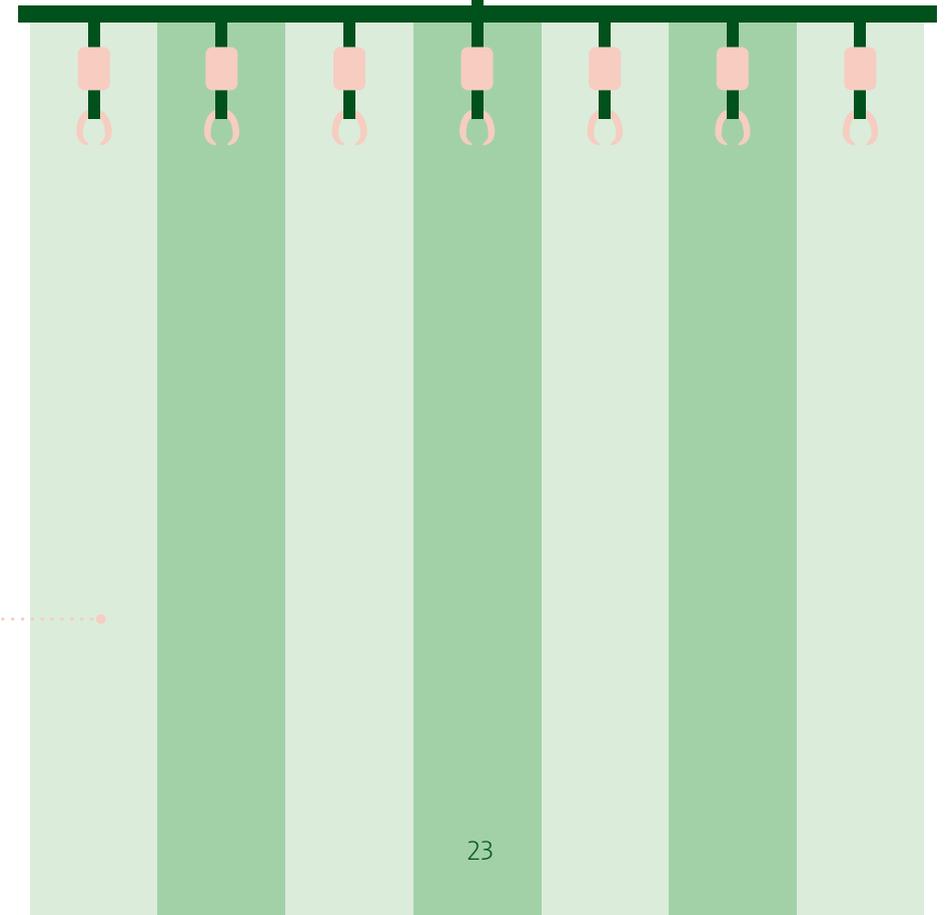
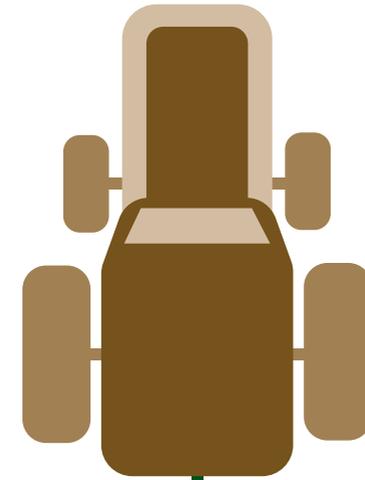
# Denmark and the EU Common Agricultural Policy

Denmark is a member of the European Union, and therefore Danish farmers benefit from the EU Common Agricultural Policy. This policy consists of two main parts: Pillar 1 which provides direct payments to the farmers, and pillar 2 which is the rural development policy.

The direct payments aim to ensure the farmers' income and at the same time support a competitive and sustainable production of agricultural products and food. Farmers must meet the high European standards of environmental protection, animal welfare, plant and animal health as well as food safety in order to obtain the subsidies.

The rural development policy supports actions such as modernizing production facilities, as well as agri-environmental measures and organic farming.

Farmers must meet the high European standards of environmental protection, animal welfare, plant and animal health as well as food safety.

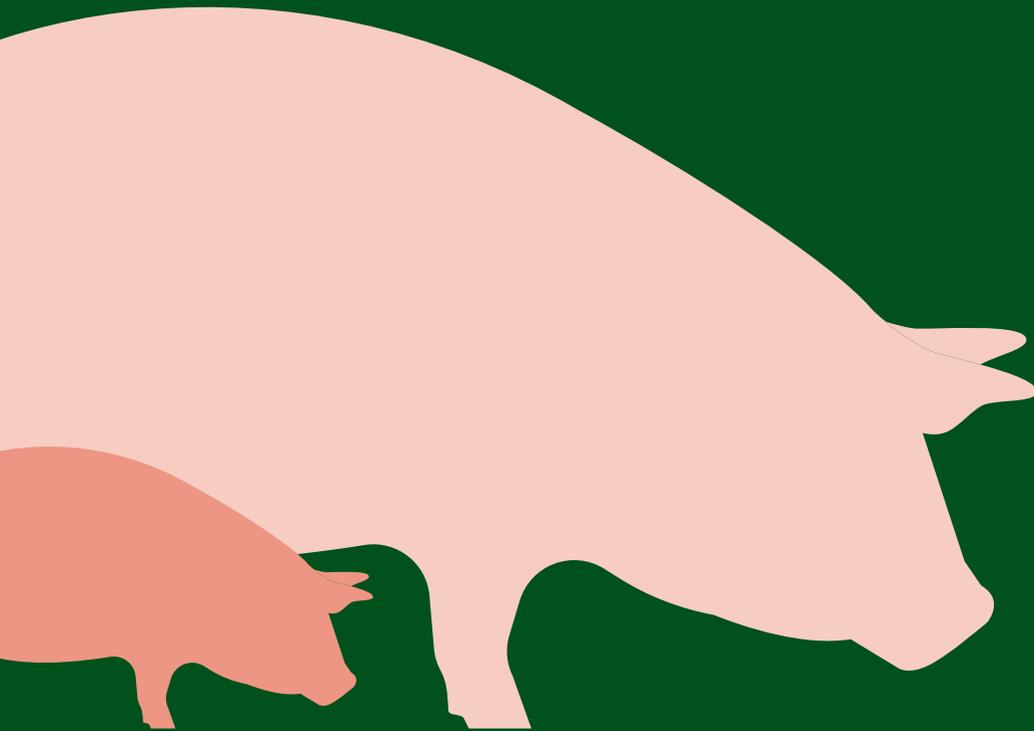


## 4. Agricultural Production

150%



The Danish ingredients industry is a major player internationally, with about 15% of the global market.



## Productivity

Overall the productivity has almost doubled over the last three decades.

## Pigs

Denmark is globally known for its production of pigs and processing of pig meat. The sector has over the years increased its output due to a high degree of specialisation and a continuously increasing productivity. For instance, each sow gets more piglets today than previously. Overall, the productivity has almost doubled over the last three decades.

Food safety of Danish pork is exceptionally high. No growth promoters or hormones are used in Danish pig production and the use of veterinary medicine is among the lowest in the world. More than 10,000 random samples are taken every year to test for unwanted residues. Since the monitoring program began in 1985, no traces of pesticides or heavy metals above the Maximum Residue Level (MRL) have been found and only one single trace of hormones has been identified. In case of irregularities, fast action is ensured as all products are fully traceable throughout the value chain. Environmental sustainability has become a focus point in the Danish pig production, and it is steadily improving.

The environmental impact of producing one pig today is only half of what it was in 1985.

# Dairy

Danish agriculture is likewise characterised by an important dairy sector. Over the years it has taken advantage of economies of scale within milk production, so the average yield per cow today is close to the double of what it was 30 years ago.

Danish dairy products are characterised by a high, uniform quality. Superior food safety is obtained by full transparency within the value chain. Throughout the production, all products and ingredients are traceable, and the use of medicine in dairy cows is strictly regulated and controlled. Dairy production in Denmark is increasingly sustainable, and resource efficiency is central for both farmers and dairies. With plenty of rainfall and temperate conditions, the Danish climate is favourable for an environmentally balanced dairy production.



## Control

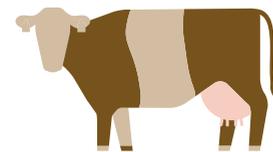
Throughout the production, all products and ingredients are traceable, and the use of medicine in dairy cows is strictly regulated and controlled.



## Beef

While focus traditionally has been on dairy production, Danish agriculture can also boast of beef production. As with other food products produced in Denmark, beef also meets a very high level of food safety standards. Hormones and growth promoters are banned in the production process and the clear focus on animal welfare minimises the need for medicine. The animals are fully traceable, from abattoir and back to the individual farmer. Combined with strict control at all levels, the entire production chain is completely transparent.

The sector is continuously looking for new ways to produce in a more sustainable way, by reducing the carbon footprint through the entire chain of production. For example, through new research in fodder additives it will be possible to reduce the methane output per cow significantly in the primary production. Also, at the slaughter houses the industry makes sure that nothing is wasted. By using all parts of the cattle including the hide, blood and by-products, the environmental footprint per cow is minimised.

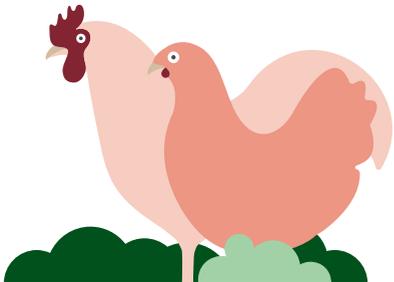


Hormones and growth promoters are banned in the production process.

## Poultry and Eggs

Danish poultry and egg production is another important agricultural sector in Denmark. It is characterised by a high degree of market concentration among producers and an optimised production process. The poultry sector is export driven with 60% of the production being exported. Denmark also imports a significant volume of poultry meat.

Danish broiler meat has a high veterinary and professional standard. Broilers and hens are well protected against infections, so antibiotics are only used very rarely. Since 2008, there has been a zero tolerance against salmonella and therefore meat and eggs are salmonella free. The EU has by law granted Denmark the status as salmonella free in the production of chicken meat and eggs. Full traceability in the entire value chain of meat and eggs ensures fast action in case of irregularities. Water and energy consumption in the production is low, and high feed quality and good management practise ensure a low feed consumption per kg. meat produced.



Danish broiler meat has a high veterinary and professional standard.

# Welfare

Strong efforts have been taken to ensure the welfare of the animals over the production cycle.

## Fishery and Aquaculture

With a lengthy coastline and the Faroe Islands and Greenland in the Atlantic Ocean, fishery has a long tradition in Denmark. 95% of fish farmed or landed in Denmark are exported, and Denmark is the largest exporter among EU-27 of fish and shellfish out of the EU. To meet increasing environmental concerns, 72% of Danish caught fish (excluding pelagic species mackerel and herring which currently have their MSC-certification suspended) are certified by the internationally recognized scheme called MSC, guaranteeing sustainable fishery. Including pelagic species 1/3 of all Danish catches are MSC-certified.

The Danish aquaculture industry is going through a rapid development. Increasing demand for sustainability in the production has accelerated this, and 55% of Danish freshwater aquaculture production for consumption is now certified (by the internationally recognized scheme called ASC). Organic production is gaining foothold, and new types of land-based systems focusing on sustainability are introduced. There is full traceability of Danish fish and shellfish, ensuring high food safety.



95% of Danish fish are exported, making Denmark the largest exporter of fish and shellfish in the EU.

## Field Crops and Horticultural Production

An important sector for Danish agriculture, the total plant production – consisting of crops, seeds, vegetables and fruits – is mainly used for animal feed (85%), while the rest is consumed as food products. The main crops are cereal, namely barley, wheat, rye and oat. Barley is used for malt, while wheat and rye are used for flour and oat goes into breakfast cereals. Other important crops are potatoes and rape seeds, and in Southern Denmark sugar production of sugar beets takes place.

Horticultural production consists mainly of open air fruits and vegetables, equivalent to 25% of total plant production value. Greenhouse production is predominantly made up of pot plants, though the number of producers is decreasing. The food safety of Danish fruits and vegetables is high. Pesticide residues are found in significantly fewer samples and at lower levels, well below threshold values, than in produce originating from other EU or non-EU countries. The horticultural sector is working with advanced integrated pest management systems and use of biological control.

## Plant-based Food Products

The market for plant-based food products has experienced rapid growth, as the demand for consuming more plant-rich diets has emerged. As a result, the agricultural production of high-quality protein-rich plant crops for plant-based food products has increased greatly. Namely, the area for protein-rich plant crops production has doubled from 2017 to 2022, employing 13,400 employees and creating economic value of 8.6 billion DKK. Optimal climate conditions for production of protein-rich plant crops such as peas and an agricultural sector build upon technology, innovation, and knowledge places the Danish agricultural sector in a strong position to be front-runners of producing plant-rich crops for input to this still developing market for plant-based food products.

To strengthen and ensure the Danish food and agricultural sector's position within the market for protein-rich crops and plant-based food products, collaboration within the sector is essential. This is facilitated in the Danish Agriculture & Food Council's sector community for plant-rich produce and products, called PlanteVærket. The community provides a powerful collaborative environment between the Danish actors in the industry throughout the entire food value chain. The members gain the latest market insights and market access both nationally and internationally which create opportunities to gain valuable market shares and ensure optimal growth.



The total plant production – consisting of crops, seeds, vegetables and fruits – is mainly used for animal feed (85%), while the rest is consumed as food products.

# Breeding

Breeding is a good example of one of the strongholds of the sector which at the same time combines efficiency and climate action. Denmark has a long tradition for pig breeding and the number of piglets per sow produced in a year has increased by more than 20% since 2011, while the lean meat content has increased. These significant results have led to a large annual export of breeding animals and semen. Work to reduce feed use of pigs has also reduced the carbon footprint of the pig sector. In the dairy sector, efforts to improve breeding have resulted in an average cow producing 64% more milk than in 1984 (10,140 kg. annually).

The Danish climate is suitable for seed production, and this has been a driver for a strong Danish plant breeding tradition. Today, more than 60% of all grass and clover seeds in the EU are produced in Denmark. A considerable production of garden seeds, such as spinach and various kinds of cabbage, flowers and herbs, also takes place in Denmark, and the entire production volume is exported.



Today, more than 60% of all grass and clover seeds in the EU are produced in Denmark.



Danish ingredients constitute almost 15% of the global market.

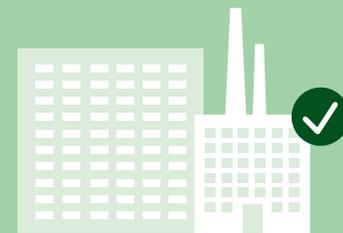
## Ingredients

The Danish ingredients sector is a major player both nationally and globally with about 15% of the global market. The sector employs almost 10,000 people in Denmark out of 180,000 people employed in the entire food cluster. The Danish ingredients industry includes companies that produce or handle feed and food ingredients. The sector is strongly innovation-driven. Especially research and innovation within alternative proteins based on side streams from the food value chain are emerging. These ingredients include microalgae, insects, fermented proteins, emulsifiers, enzymes and cultures, natural food dyes, flavors, and bioenergy. Ingredients can also emerge from the utilisation of side streams from the animal sector e.g. specific dairy ingredients such as whey proteins.

Today a major part of the production is exported, and the turnover of the Danish sector is approximately 6.75 billion euros. Many ingredients are based on natural raw materials, which is a major trend in the global food industry. Additionally, the sector is also important for the development of health-related products, another major trend in the global food industry. The sector's prominent position is obtained through massive and continuous investments in research and development. New knowledge and processing methods lead to new opportunities on how to optimise natural resources by integrating them in new food ingredients. This focused work results not only in new products but also in improvements and renewals in applications. These Danish solutions are important for the challenges we are facing today, ensuring safe and sustainable food systems as well as contributing to reducing climate changes globally.

## 5. Quality and Food Safety

100%



HACCP systems have been implemented in 100 percent of the Danish food companies, ensuring food safety.

Danish food products are recognised internationally for their outstanding food safety. From farmer to super-market all products are fully traceable. This system makes it simple to control each part of the value chain. In case of irregularities, affected goods can be traced and withdrawn immediately and corrective action in the previous parts of the value chain can be taken. Internationally recognised management systems for reducing the risk of safety hazards in the food production chain (so-called HACCP systems) have been implemented in 100 percent of the Danish companies, ensuring food safety.

The production of food and agricultural products is highly regulated. Most of the regulation is based on EU regulation, and often these rules are interpreted and implemented strictly in Denmark, leading to even higher standards. The areas of regulation include hygiene, animal welfare, the use of medicine, pesticides, fertilisers etc.

In certain areas, Danish legislation goes further than the EU legislation. In addition, many food companies, such as the major co-operatives, have developed private and voluntary quality standards, containing higher requirements than the national legislation. Finally, some of the food production is subject to special contracts between smaller groups of consumers in specific markets, reflecting special requirements. They can be fulfilled through such special contracts and products would be distinctly marked in order to indicate such conditions.

The high levels of food safety and quality have furthermore laid the foundation for Danish gastronomy where a new generation of chefs have developed a beautiful new gastronomic culture, proudly based on regional and seasonal raw materials in the Nordic tradition.



Food safety and quality have furthermore laid the foundation for Danish gastronomy.

## 6. Organic Production

12%



Around 12% of Danish farmland is cultivated organically.



Organic agriculture and foods are popular in Denmark. Around 12% of Danish farmland is cultivated organically, and Danish consumers buy more organic food items than any other Europeans. In organic production, it is prohibited to use inorganic fertilisers, chemical pesticides and GMOs.

In processed, organic products, only a very limited number of mostly natural additives are allowed. The use of veterinary medicine is even more restricted than in conventional Danish agriculture. In organic animal husbandry, animals are ensured surroundings that allow them to express their natural behaviour, along with plenty of space, daylight and access to outdoor grassland from the middle of April until November.

Danish organic production is subject to thorough inspections from state authorities. The inspections take place along the entire value chain, from farm to fork. As authorities are free of economic interests, consumers have a high confidence in the system.



Danish consumers buy more organic food items than any other Europeans.

## 7. Future Food and Farming

20%



Biogas production is expected to pass 20 percent of the Danish natural gas consumption in the near future.



A dedicated focus on crops for feed and food makes Danish agriculture an important contributor to the sustainable development of our food system.

# 1/3

About 1/3 of the straw production is used in central heating and energy production.

## Crops for Feed and Food

Not only is Danish genetics science leading the development of more climate-friendly and robust cattle and pig production, but also a dedicated focus on crops for feed and food makes Danish agriculture an important contributor to the sustainable development of our food system.

Large investments are made into establishing a more diverse range of protein-rich crops for livestock feed. Moreover, research projects are aimed at making organically grown produce more robust. A future area of particular interest is pesticide-free, non-organically grown produce due to the increasing concern for biodiversity and groundwater quality.

## Bioenergy

Danish agriculture plays an active role in securing non-fossil energy sources. About 1/3 of the straw production is used in central heating and energy production. Adding bioethanol and biodiesel including second generation biodiesel to fuel is an important factor in reducing the CO<sub>2</sub> emissions from the transport sector.

Biogas production is based on organic products such as slurry and side streams from industries, restaurants and households, and straw is a rapidly developing feedstock. Biogas can be used as a fuel or as a substitute for natural gas in central heating and electricity production, and the production is expected to pass 20% of the Danish natural gas consumption in the near future. The residues from biogas production can be used as fertilisers, thereby recycling plant nutrients.

## Agribusiness

The Danish agribusiness sector covers a wide array of highly innovative enterprises, working intensively to transform today's advanced farming practices into an even more advanced production system in the future. It covers machinery for agriculture, livestock housing equipment, slurry and crop handling equipment and bioenergy. Such optimal machinery for use in the fields, in the stables and in further processing is essential for the productivity, sustainable development and high quality of Danish agricultural output.

For instance, slurry injectors and incorporators provide ideal conditions for fast absorption of nutrients by the crops in the fields, leading to higher yields, less use of fertilisers and reduction in ammonia loss. Also, new ventilation systems in the stables have improved the production environment, animal welfare and conditions for farm workers. Similarly, instruments have been developed to perform precise grain analysis in order to ensure fair payment to farmers around the world, as well as reducing food loss.



## Food Technology

Similarly, Danish companies excel in developing tomorrow's technology used in food processing. They work to design equipment and machinery for food producers that help them produce high quality food products which are safe and with as little impact on the environment and climate as possible. Examples include advanced equipment to monitor dairy, meat or wine products during production, as well as machine vision technology and robot guidance in production lines.

Besides the foodtech companies focused on the development of advanced processing hardware, a number of specialised technology companies work - together with Danish scientists - on establishing future processes for protein extraction from e.g. grass and clover. Others develop biorefining processes which exploit new protein sources, such as starfish, algae, and side streams formerly used for livestock feed.

Together these examples of innovative efforts taken across the entire food cluster illustrate the ongoing work with shaping and developing the Danish circular bioeconomy.



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**Table 1.1**

Agricultural area by type of crop, 1,000 ha	2000	2018	2019	2020	2021
<b>Total cultivated areas</b>	<b>2,647</b>	<b>2,626</b>	<b>2,626</b>	<b>2,620</b>	<b>2,619</b>
Percentage of leased area in Denmark	26	38	39	41	41
Cultivated in percent of Denmark's area	62	61	61	61	61
Winter wheat	611	407	559	483	520
Spring wheat	8	33	13	18	26
Rye	50	90	145	115	108
Winter barley	145	82	100	88	79
Spring barley	587	708	491	564	542
Oats	44	80	50	75	65
Triticale and other cereals	55	21	21	21	23
<b>Cereals, total</b>	<b>1,500</b>	<b>1,420</b>	<b>1,379</b>	<b>1,364</b>	<b>1,363</b>
<b>Pulses</b>	<b>36</b>	<b>34</b>	<b>22</b>	<b>27</b>	<b>34</b>
Potatoes	39	49	54	63	55
Sugar beets for production	59	34	30	33	33
Fodder sugar beets	18	4	5	4	4
<b>Root vegetables, total</b>	<b>115</b>	<b>87</b>	<b>88</b>	<b>100</b>	<b>92</b>
Field vegetables and flowers	11	13	14	13	13
Fruit and berries	8	6	5	5	5
Other plants	3	2	2	2	2
<b>Horticultural products, total</b>	<b>22</b>	<b>21</b>	<b>20</b>	<b>20</b>	<b>20</b>
Rape seed, total	99	145	165	146	165
Other seed and linseed	5	-	1	1	1
<b>Seeds, total</b>	<b>104</b>	<b>145</b>	<b>167</b>	<b>147</b>	<b>166</b>
<b>Seeds for sowing</b>	<b>79</b>	<b>103</b>	<b>113</b>	<b>106</b>	<b>110</b>
Cereal for green fodder	119	51	54	49	48
Maize for silage	61	178	186	188	171
Grass, lucerne etc. in rotation	252	266	284	283	276
Grass and forages in rotation, total	433	494	525	521	494
Christmas trees	-	24	19	22	20
Other crops	1	77	78	82	77
Grass outside rotation	166	213	207	222	234
Set aside area with grass	191	9	9	8	8
<b>Other, total</b>	<b>359</b>	<b>322</b>	<b>313</b>	<b>335</b>	<b>340</b>

**Figure 1.1**

Food cluster exports proportion of total goods exports from Denmark, 2021, %

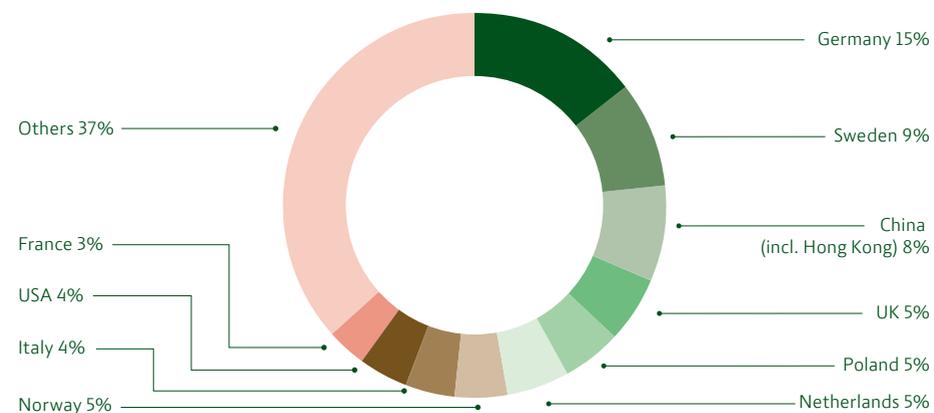


Note: Food cluster exports consist of food, biobased products and agri-technology. Figures based on export values.

Source: Danish Agriculture and Food Council & Statistics of Denmark, table KN8MEST

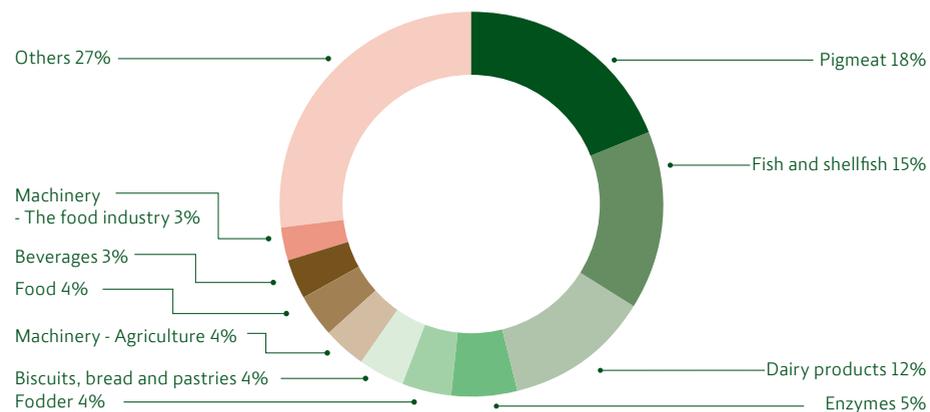
**Figure 1.2**

Food cluster exports by destination country, 2021, %



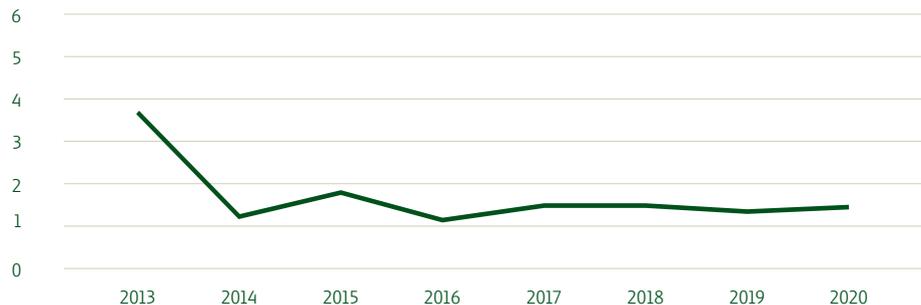
Note: Figures based on export values  
Source: Statistics Denmark

**Figure 1.3**  
Food cluster exports by type of good, 2021, %



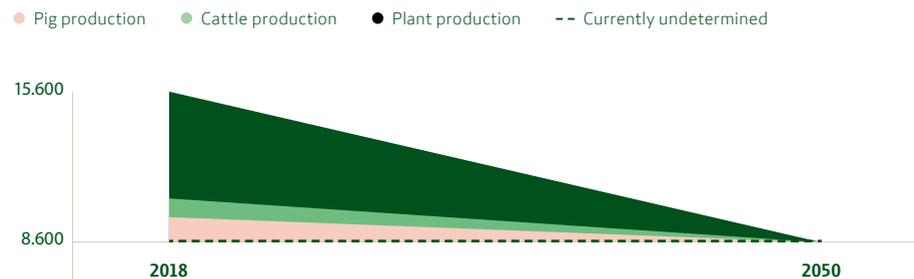
Note: Figures based on export values  
Source: Statistics Denmark

**Figure 2.4**  
Development in the indicator for pesticide pressure, PBI



Note: The indicator shows possible health and environment related negative impacts of plant protection products.  
Source: Environmental Protection Agency of Denmark.

**Figure 2.5**  
Food cluster CO<sub>2</sub> reduction potential with existing reduction measures



Note: The figure indicates how existing CO<sub>2</sub> reduction measures of the various sectors are expected to contribute to reducing the total food cluster CO<sub>2</sub> emissions  
Source: Danish Agriculture & Food Council/SEGES

**Table 3.2**  
Number of co-operative enterprises, by type

	1939	1964	1992	2009	2019	2020	2021
Total farms	210,000	175,000	75,000	47,384	33,607	33,148	31,395
Co-operative dairies	1,399	904	23	11	8	7	7
Co-operative pig slaughterhouses	61	62	5	2	1	1	1

Source: Danish Agriculture & Food Council

**Table 4.3**

Livestock numbers by May/June, 1,000	2017	2018	2019	2020	2021
Cattle, total	1,545	1,540	1,491	1,499	1,488
- of which dairy cows	570	575	567	567	564
- of which suckler cows	85	85	79	82	79
Pigs, total	12,308	12,781	12,299	13,163	13,168
- of which sows	1,014	1,045	1,002	1,037	1,042
Sheep	154	144	147	135	135
Hens more than ½ year old	6,148	5,477	6,033	5,705	5,795
Young chickens	14,585	13,874	16,430	15,630	15,659
- of which broilers	13,297	12,350	14,690	13,950	14,056
Turkeys	304	264	176	240	121
Ducks	174	166	55	151	57
Geese	4	4	2	6	3
Mink	3,416	3,363	2,466	2,216	0

Source: Statistics Denmark, table HDYR1 & PELS33.

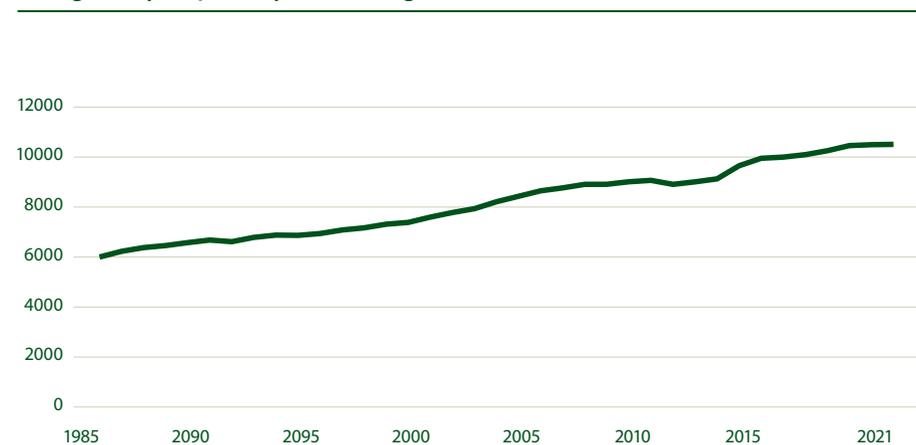
**Table 4.4**

Size of livestock production, million kg	2000	2017	2018	2019	2020	2021
Milk production, total	4,720	5,573	5,694	5,693	5,745	5,722
- Butter	46	57	74	75	73	80
- Cheese	306	450	452	457	468	455
Beef and veal	171	135	142	137	133	134
Pork	1,748	1,896	1,967	1,864	1,952	2,082
Poultry	205	155	159	169	166	163
Eggs	47	61	61	61	62	62
Fur skin, 1,000 pieces	11,000	17,900	17,150	12,850	-	-

Source: Statistics Denmark, table PELS1, ANI4, ANI5, ANI6, ANI7, ANI8, Mejeristatistik 2017 og Danske æg.

**Figure 4.6**

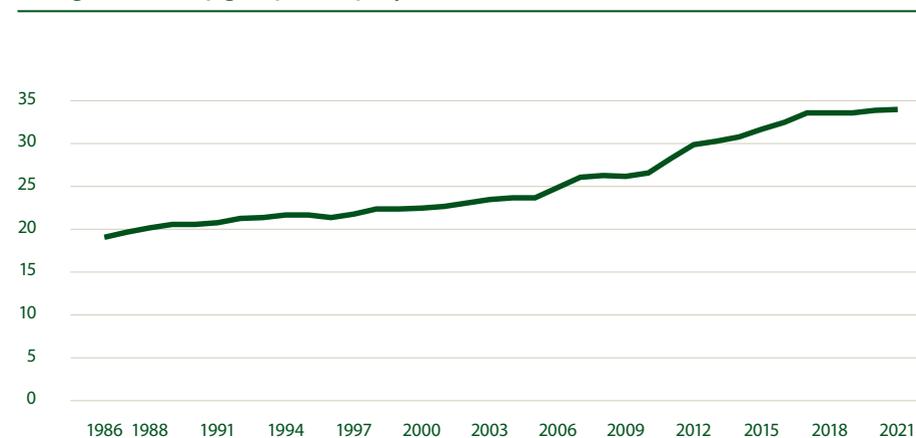
Average milk yield per dairy cow, 1,000 kg



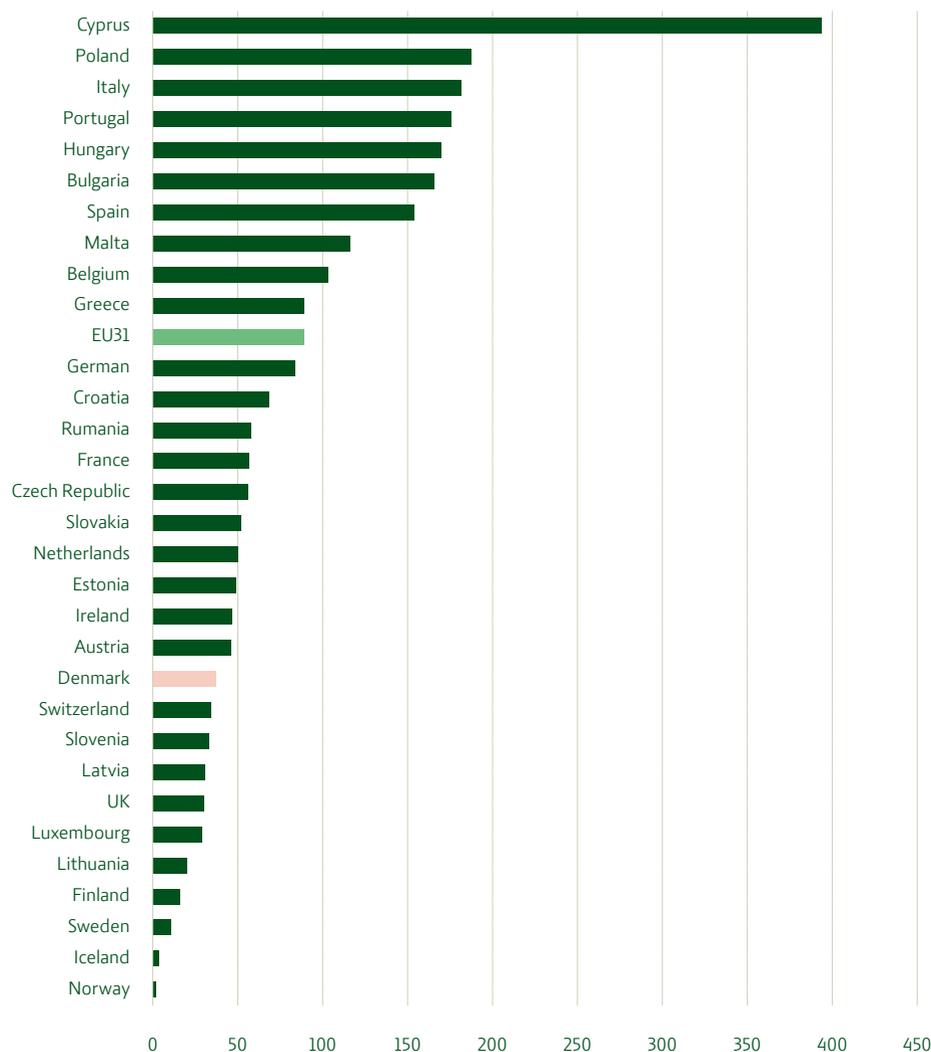
Source: Danish Agriculture and Food Council, Mejeristatistik 2021

**Figure 4.7**

Average number of piglets per sow per year



Source: SEGES, Produktionsøkonomi Svin 2021.

**Figure 5.8****Agricultural use of antibiotics in Europe, mg per produced kg of biomass, 2020**

Source: European Medicines Agency, Sales of veterinary antimicrobial agents in 31 European countries in 2019 and 2020.

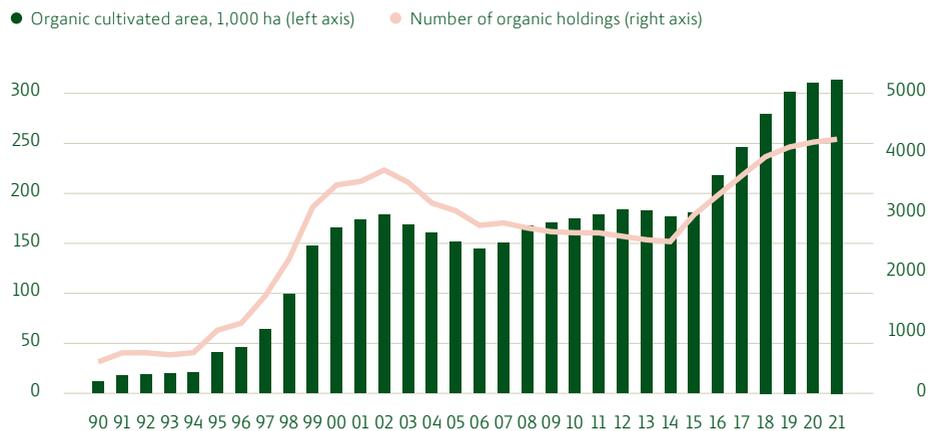
Note: Population Correction Units (PCU) is a standardized unit which corresponds to calculating the different populations of livestock in biomass (kg. animal produced).

**Table 5.5**

Crop yield in Denmark, 1,000 tons	2000	2017	2018	2019	2020	2021
Winter wheat	4,651	4,761	2,524	4,627	4,018	3,972
Spring wheat	43	73	131	70	100	122
Rye	263	723	482	894	708	680
Triticale	244	61	38	52	42	50
Winter barley	816	846	438	701	622	505
Spring barley	3,164	3,146	3,048	2,967	3,583	2,998
Oats and mixed grain	233	350	309	279	467	368
Grain maize	-	39	36	41	39	46
<b>Cereals, total</b>	<b>9,413</b>	<b>9,999</b>	<b>7,005</b>	<b>9,630</b>	<b>9,579</b>	<b>8,742</b>
<b>Pulse, total</b>	<b>138</b>	<b>89</b>	<b>89</b>	<b>86</b>	<b>112</b>	<b>116</b>
<b>Gathered straw, total</b>	<b>3,699</b>	<b>3,494</b>	<b>3,640</b>	<b>3,518</b>	<b>3,294</b>	<b>3,085</b>
<b>Rape, total</b>	<b>294</b>	<b>742</b>	<b>489</b>	<b>729</b>	<b>560</b>	<b>651</b>
Potatoes	1,645	2,171	1,807	2,409	2,763	2,375
Sugar beets for production	3,173	2,455	2,108	2,340	2,545	2,546
Fodder sugar beets	1,153	295	265	323	285	268
<b>Root vegetables, total</b>	<b>5,971</b>	<b>4,921</b>	<b>4,179</b>	<b>5,072</b>	<b>5,593</b>	<b>5,189</b>
Lucerne	332	112	30	46	49	32
Maize for silage	2,105	6,454	6,315	7,422	7,396	7,072
Cereal for silage	2,360	897	762	1,031	950	793
Grass and clover in rotation	10,368	14,293	9,946	12,444	12,564	11,233
Grass outside rotation	3,989	2,994	3,319	2,362	2,420	2,267
After-grass from grain and whole crops	2,878	463	366	529	505	428
<b>Grass, green fodder and after-grass, total</b>	<b>22,031</b>	<b>25,213</b>	<b>20,738</b>	<b>23,834</b>	<b>23,884</b>	<b>21,824</b>

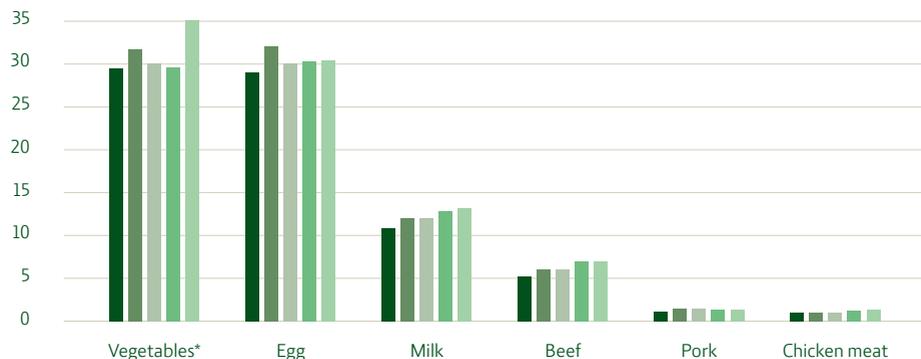
Source: Statistics Denmark and others

**Figure 6.9**  
Organically cultivated area and holdings, 1990-2021



Note: Change in calculation method from 2005  
Source: Ministry of Environment and Food of Denmark

**Figure 6.10**  
Organic food production proportion of total food production, per category, 2021, %



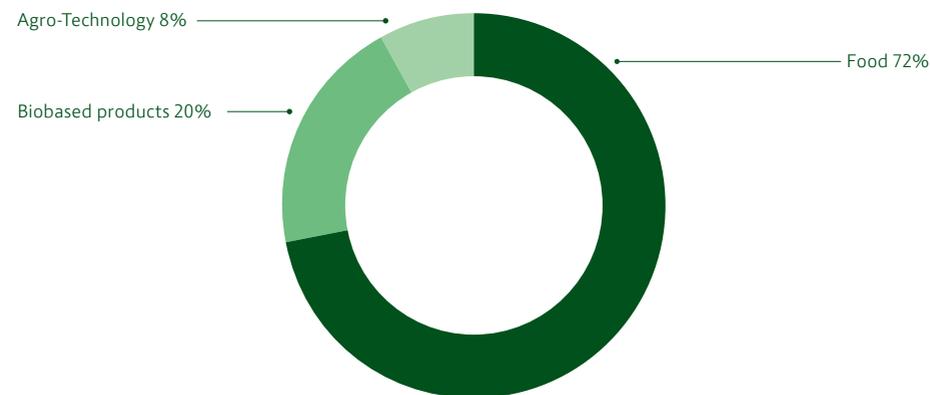
Note.: \*Vegetables are based on area  
Source: Danish Agriculture and Food Cluster samt Statistics Denmark

**Table 7.6**  
Extracted bioenergy, by type of biomass, PJ (petajoules)

	1980	1990	2000	2010	2018	2019	2020
Straw	5	12	12	23	18	18	19
Wood chips	-	2	3	16	29	31	37
Firewood	8	9	12	27	19	16	15
Wood pellets	-	2	5	30	56	54	48
Wood waste	4	6	7	9	8	6	7
Biogas	0	1	3	4	13	17	21
Waste renewable	6	9	17	21	18	20	20
Biodiesel/oil	-	1	0	9	13	13	16
<b>Total</b>	<b>22</b>	<b>41</b>	<b>59</b>	<b>139</b>	<b>175</b>	<b>174</b>	<b>182</b>

Source: Danish Energy Agency 2020

**Figure 7.11**  
Agri-technology exports proportion of total food cluster exports, 2021, %



Note: Figures are based on export values  
Source: Danish Agriculture and Food Council & Statistics of Denmark, table KN8MEST

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