

APRIL 2020

FOOD AND AGRICULTURE IN DENMARK

SOLUTIONS OF TOMORROW

Prepared by The Trade Council of Denmark in Istanbul



1. FOOD & AGRO BUSINESS IN DENMARK¹

"The Danish government aims to create an ambitious strategy for the green transition in our society so that we can produce and consume smarter, with respect for limited natural resources"

Lea Wermelin

Danish Minister of Environment and Food

The Danish food cluster has a strong value chain, covering everything from primary and processed food production, food technology and ingredients industry, know-how and research to the wide range of products available to consumers all over the world. It has taken the time and effort of many companies, researchers and public and private organisations to make the Danish food sector what it is today.

Denmark's food cluster is known around the globe for quality, safety, sustainability, organic production, gastronomy...the list goes on.

Doing business with the Danish food cluster, you become a part of tomorrow's opportunities and solutions. In Denmark, successful researchers, entrepreneurs and food producers are already future bound when it comes to their knowledge of resource efficiency, sustainability, innovation, quality, food safety, organic production and gastronomy.

Around the world, Danish food products are synonymous with high quality, reliability and excellent hygiene. Danish manufacturing businesses operate some of the world's most advanced processing plants with world-renowned research and innovation capabilities.

One-third of food in the world produced for human consumption every year - approximately 1.3 billion tons - gets lost or wasted, according to the UN Food and Agriculture Organization (UNFAO).

Responding the biggest problem of our time, Denmark launched several initiatives for ensuring sustainability in food and agro business. When you do business with the Danish food cluster, you will find a wealth of experience and know-how about resource efficiency – enabling your company to produce more with less and at much lower cost.

In this report, you will find the solutions of tomorrow with the most recent facts and figures from Danish food and agro business sector.

¹ This report is based on food and agro business statistics of Denmark retrieved from the Danish Ministry of Environment and Food, Invest in Denmark, Statistics Denmark, World Bank, IMF, OECD and UN databases. The report is prepared in April 2020.

IMPORTANT FACTS & FIGURES²

Denmark has **33.607 farms** including small and big cultivated areas (**2.625.965 hectares** in total). Combining winter wheat and spring barley, the total harvest is almost **8.000 million** kg.

Danish farmers produce **247.115 tonnes** of fruit and vegetables a year. Carrots, onions and apples have the most share in production of Denmark.



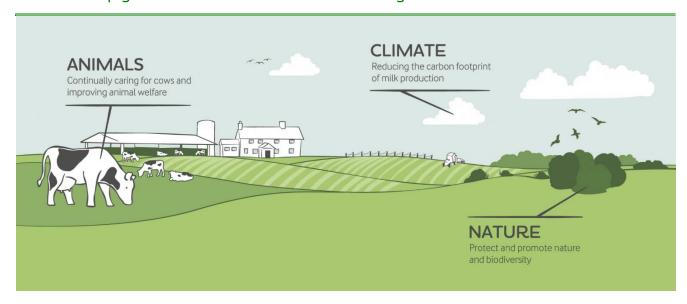
Share of Danish fish production being exported

"Denmark develops know how, ingredients, technology and food solutions that have an impact on the global food production. Through an integrated value chain related industries, public authorities and knowledge institutions, Denmark has shown strong results within innovative, sustainable and efficient food products and solutions."



Source: Copenhagen Economics based on Statistics Denmark

In more than **13.000 livestock farms**, the number of cattles exceeds **1,5 million** and the number of pigs is almost **12.750** with an increasing trend.



² Based on data retrieved from Turkish Ministry of Health, UN Trade dataset, World Bank, OECD, IMF 2019 databases.



Denmark produces more than **6.400 million kg** milk and more than **123 million slautherings** a year of cattles, pigs, sheeps, lambs and poultry. Pig meat and diary products are Denmark's main produced and consumed livestock products. Denmark is one of the top exporters and consumers of diary ingredients in the world.

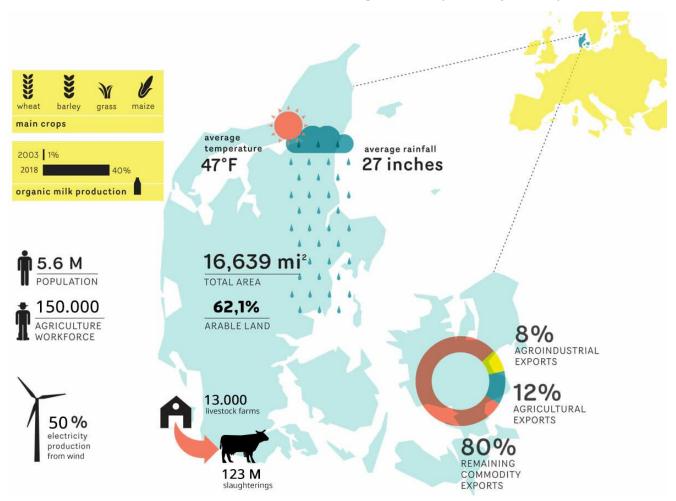
Danish agriculture produces enough food for around **15 million people** - three times the population of Denmark; although, the food sector provides almost **150,000 full-time jobs**, equivalent to 5-6% of total Danish employment. The keyword is process efficiency.



➤ Denmark has the highest organic market share with 11.5 percent of its total food market. Denmark organic food market is expected to be USD 8.2 billion in 2025. Danish consumers spent the most on organic food (312 euros per capita in 2018).



Although Denmark has a relatively small land area compared to other European countries, **62%** of its land area is used for intensive agriculture primarily for exports.



2. HEALTHY NUTRITION AND SUSTAINABLE SOCIETY

Quality, collaboration and sustainability are the core values of the Danish food cluster.

The high quality of Danish food production is a vital part of the Danish food cluster's DNA. The collaboration between researchers, companies and public and private organizations forms the foundation of Danish process efficiency for solving challenges through applied knowledge and innovation.

The strong tradition on sustainability and resource efficiency cover the whole value chain, from environmentally friendly agricultural production to the reduction of food waste.

In this section, you will find the strongholds of Danish food cluster's DNA.

FOOD INGREDIENTS

Denmark supplies more food ingredients per citizen than any other country in the world. It takes innovative ingredients to meet world demand for safe, healthy and delicious foods. Danish companies have a **14% share** of the global ingredient market – exporting as much as **98%** of the ingredients they produce.



Denmark has driven ingredient innovation ever since the 19th century, when the first pioneering work took place in **Carlsberg Laboratory**, **Chr. Hansen Labs** and the chemical laboratory at the **University of Copenhagen**. Today, Danish ingredient sector is a global frontrunner in areas such as enzymes, emulsifiers, cultures, natural food dyes, flavors and whey protein.

Danish ingredient companies play a key role in solving some of the largest food challenges the world is facing. In a few decades, the world population is expected to hit 9 billion. To feed all these people, the global food production must become more effective with higher utilization of raw materials. Furthermore, the increasing amount of elderly and lifestyle diseases demand new health-promoting ingredients.

Food waste is a global challenge. According to the United Nations, today roughly one third of all food for human consumption gets lost or is wasted through the value chain. That is approximately **1.3 billion** tons of food every year. The Danish food cluster already offers several solutions to minimize food loss. Examples are technologies needed for cold chain operations or ingredients needed to expand the lifetime of a product.



Over the last years, the Danish population has started to strive cutting down on food waste. It is estimated that since 2006, Danes have decreased their annual food waste by almost 25%. This is both due to increased awareness by Danish consumers and the results of actions taken by Danish companies and public institutions. I.e. a Danish startup Too Good To Go saves more than 20 million meals per year.

FOOD SAFETY

Even though Danish agricultural area is relatively modest, food production feeds three times our population, a feature that shows the high productivity of the Danish agricultural production.

Traceability and food safety are two essential ingredients in Danish food production. Around the world, Danish food products are synonymous with high quality, reliability and excellent hygiene. Danish food manufacturing businesses operate some of the world's most advanced processing plants and the research and innovation capabilities are internationally renowned. This ensures outstanding food safety.



Denmark is globally recognized for its sustainable food production. Both customers and producers are dedicated to leaving a better world for future generations. The Danish food cluster is home to one of the most sustainable and least polluting productions in the world. The food production in Denmark is efficient with low usage of resources, thus making the environmental footprint small.

FOOD TECHNOLOGY

By 2050, the world population is expected to hit 9 billion people. With the changing consumption pattern of an emerging, global middle-class, every food producer must find a way to produce more with less. This is where food technology can really make an impact as it is not just a question about producing more, but about producing more efficiently.

Danish agriculture machinery and food technology is one of the biggest export adventures – built on high productivity with low environmental impact. Innovative technology solutions make food production more efficient and food loss lower.

The secret of triple efficiency began with the Danish cooperative movement over a century ago. Since then, close cooperation between farmers, consultants, researchers and businesses became a tradition that has stuck – and still gives results.

Today, progressive farming methods and sophisticated processing technologies are at the heart of the Danish food industry's adventure. Danish companies are world leading in a large number of technologies and offer a significant product portfolio of machines and equipment to produce sustainable food at a reasonable price. Of the food technology Denmark produce, 80% is sold to international food and agriculture companies that value its high quality, efficiency and ability to minimize food waste.

Not only can Danish technology reduce food loss in for example cold chain processes, it also contributes to a more standardized production ensuring high quality at all times.

GASTRONOMY AND NEW NORDIC CUISINE

The New Nordic Cuisine has really advanced over the last 15 years. This development has influenced the gastronomic scene as well as general food production in Denmark. New trends have stimulated consumers' interest in gastronomy and provided incentives for farmers and food companies to refine their food products.

Denmark focuses on gastronomy as a tool to ensure better food for more people. As a result. Today Copenhagen is the city in Scandinavia with the largest amount Michelin stars.

With a cold and wet climate with long and dark winters, the Danish diet has traditionally focused on providing highly nutritious and vitamin filled food that could be stored into the winter months also. For this reason, techniques, such as pickling and persevering are widely used even today, and grains, fish, meat, berries, root vegetables and hardy greens have for centuries been the main stables of the Danish diet.



ORGANIC FOOD

Organic food production has put Denmark on the world map as the organic frontrunner for several years. The widespread usage and high level of knowledge on organic labels among both private and professional buyers keep the whole Danish value chain of organic food production on track regarding product development and in handling large scale production.



Today, Danish retail is world-leading in organic sale, having the largest market share compared to any other country in the world. Denmark takes the lead when it comes to the consumption of organic food and has a huge range of organic food products.

In Denmark, the consumption of organic foods has moved from the luxury good segments towards mainstream consumption. By 2020 the Danish government has a plan to double the areas cultivated using organic and biodynamic practices. Besides the program aims to make Denmark go completely natural. Over the last decade the development of organic action plans (OAPs) has gained momentum as a mechanism for achieving a more integrated approach to organic policymaking at the European level.

3. POTENTIAL FOR FURTHER BUSINESS PARTNERSHIPS

Here are the significant points where Danish food sector can open pathways for business partnerships and collaboration.

- > Denmark is Europe's number one hub for food innovation and organic food.
- > Businesses can benefit from Danish culture for public-private partnerships across the value chain, for example in packaging solutions, automation and safety.
- > Businesses can benefit accessing to highly efficient technology with a low environmental impact.
- ➤ Danish ingredient companies have a strong position within these areas and can support global food businesses:
 - o with a wide variety of nutritious, functional, cost reducing and health promoting ingredients.
 - o and by lengthening the lifetime of products and thus cutting down on food waste.
- Danish food technology can help global food businesses:
 - o To producing more efficiently, increase output and give a financial benefit by reducing among others water- and energy usage.
 - o To create safer foods. By testing products in the early stages with Danish technologies, unwanted residues are kept out of the final product.
 - o To bring down food waste. Several Danish technologies support businesses across the value chain to obtain an effective and sustainable production.
- ➤ Businesses can benefit from excellent conditions for working with new international partners.
- ➤ Businesses can benefit from the knowledge cluster of leading global companies, such as Novozymes, Chr. Hansen, DuPont Nutrition and Health, Arla Foods Ingredients, AAK, Palsgaard and Cargill Nordic.
- > Businesses can benefit from the strong political commitment to the food industry.
- > Danish cutting-edge generation continues to reach new gastronomic heights.
- ➤ Businesses can access to some of the best global talents, with 6,000 ingredient specialists currently employed.

4. WHAT TRADE COUNCIL CAN DO FOR YOU?

- We are your gateway to new markets.
- We are present in local markets and offer high value consultancy services to Danish and foreign companies.
- The Trade Council is part of the Ministry of Foreign Affairs of Denmark and assists Danish companies to realize their ambitions within export, innovation, growth and investment.

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