

Danish Agriculture & Food Council



# Facts and figures about Danish agriculture and food 2014

Among the Nordic countries, Denmark is the southernmost and also the smallest. The peninsula of Jutland shares its southern border with Germany and is connected to the two major islands of Funen and Zealand by bridges. Formed by the movement and melting of Ice Age glaciers, the 4.3 million hectares landscape is flat and fertile, and more than 60 percent of the land is cultivated. The climate is tempered and fairly distinct in four annual seasons.

Denmark has a population of approximately 5.5 million, one fourth of which lives in and around the capital of Copenhagen. The country is characterised by a thriving business life and a highly competitive research and development environment. For centuries, agriculture was the main industry in Denmark and farming still plays a vital role. Today, Danish agriculture is among the most efficient and knowledge based agricultural sectors in the world. This succes can be ascribed to a high level of education and organisation, embodied in the Danish co-operative movement, as well as good agricultural soil. Internal competition and demand from consumers and export markets create a constantly changing business environment for Danish agriculture and food production and, on a global scale, Denmark is in the lead when it comes to food quality and safety and the development of new agricultural products.

# **Content**

Danish co-operatives	4
Agricultural production	6
Organic agriculture	26
Exports	30
Gastronomy	34

"Danish agriculture is **among the most efficient** and knowledge based agricultural sectors in the world."

FACTS AND FIGURES



Table 1

TURNOVER IN DANISH CO-OPERATIVES, MILLION DANISH KRONER							
	2010	2013					
Dairy sector Arla Foods Thise	49,030 501	73,600 648					
Meat sector Danish Crown Tican DAT Schaub Daka	45,211 4,001 2,530 966	58,029 5,158 2,994 1,007					
Farm supply sector DLG Danish Agro	39,364 13,347	59,103 25,128					
Other sectors Kopenhagen Fur Center DLF Trifolium Danæg KMC / AKV Langholt	7,117 2,001 963 788	13,279 3,325 1,157 1,255					

Source: Company balance sheets

#### **Danish co-operatives**

The major food producing enterprises in Denmark are farmers' co-operative companies. The tradition of farmers' co-operatives dates back around 150 years to a time when farmers formed local co-operatives to strengthen their position in the value chain. Through a gradual process of mergers and consolidation, local co-operatives have metamorphosed into global-scale enterprises.

Although these enterprises are among the world's largest exporters of safe quality food products, they still operate according to the principles of full farmer ownership, voluntary and open membership and democratic member control, namely one member — one vote. Today, the co-operatives are among Denmark's largest enterprises and their collective turnover is close to 10 percent of the country's GDP.

# **Agricultural production**

Denmark is home to various types of agricultural production from animal products such as pork, beef, poultry and dairy to vegetable products including potato starch and grass seeds, as well as traditional grain and vegetable crops. Due to structural development, farms have become fewer and larger with modern trade patterns are their profitability increasingly depends on global market trends.

#### Basis for productivity

In 2010, the arable land in Denmark was 2,646,000 hectares (6,538,000 acres). The total area of grain production was 1,469,000 hectares (3,630,000 acres). Whereas the shares of winter wheat and rye are increasing, spring barley, oats, meslin and triticale are decreasing in 2013. The number of farms was 38,829, out of which approximately one third is owned by full-time farmers. In 2013 the total number of cattle was 1,615,000, and the total number of pigs was 12,076,000.

Table 2

Agricultural area by type of crop, 1,000 ha					
	2000	2011	2012	2013	2014
Total cultivated areas	2,647	2,640	2,645	2,628	2,621
Cultivated in percent of Denmark's area	62	61	61	61	61
Cereals, total	1,500	1,491	1,495	1,435	1,440
Winter wheat	611	724	589	542	646
Spring wheat	8	20	31	29	15
Rye	50	56	58	88	106
Winter barley Spring barley	145 587	131 471	104 623	111 579	119 483
Oats	44	471	51	53	36
Triticale	55	45	39	33	34
Pulses	36	7	6	8	8
Root vegetables, total	115	84	89	85	83
Potatoes	39	41	42	40	42
Sugar beets for production	59	40	43	39	36
Fodder sugar beets	18	4	5	6	5
Horticultural products, total	22	20	19	19	19
Field vegetables and flowers	11	11	10	10	11
Fruit and berries	8	8	8	8	7
Other plants	3	1	1	1	1
Seeds, total	104	153	127	176	167
Rape seed, total	99	152	127	175	166
Other seed and linseed	5	1	1	1	1
Seeds for sowing	79	66	76	80	76
Grass and forages in rotation, total	433	566	569	566	568
Cereal for green fodder	119	57	54	59	62
Maize for silage	61	174	184	183	190
Grass, lucerne etc. in rotation	252	336	332	324	316
Others	359	253	263	261	260
Christmas trees	-	18	21	19	18
Other crops	1	44	37	37	36
Grass outside rotation	166	187	200	195	200
Set a-side area with grass	191	4	5	9	6

#### Grain is Denmark's main crop

Denmark's total area is 4,310,000 hectares (10,650,000 acres). In 2013, 2,628,000 hectares were cultivated, corresponding to 61.0 percent of Denmark's total area. The highest percentage was reached in the 1930's, when 3,268,000 hectares corresponding to 76 percent of Denmark's area were cultivated. A large proportion of the land which has been given over to other use is now utilized for nature reserves and recreational purposes.

Table 3

Agricultural area and	number o	of holding	s, sorted l	oy size of l	holding			
Agricultural area, 1,000 ha					Number o	f holdings		
	2000	2010	2012	2013	2000	2010	2012	2013
Without cropland					800	1,980	1,535	1,668
Less than 5 ha.	4	4	3	3	946	1,099	900	764
5-10 ha.	60	58	58	56	8,457	8,031	8,097	7,803
10-20 ha.	164	112	112	99	11,188	7,785	7,752	6,928
20-30 ha.	161	106	80	98	6,531	4,304	3,220	3,973
30-50 ha.	353	191	189	170	9,017	4,896	4,881	4,392
50-100 ha.	763	426	397	389	10,891	5,925	5,516	5,400
100-200 ha.	715	702	657	657	5,351	4,981	4,667	4,616
More than 200 ha.	421	1,048	1,149	1,157	1,360	3,098	3,348	3,285
Total	2,647	2,646	2,644	2,628	54,541	42,099	39,916	38,829
Average size of holding, ha					48.5	62.9	66.2	67.7

Source: Statistics Denmark.

Note: From 2010 onwards, holdings with fur animals as their sole agricultural activity are included, as are several/more small holdings.

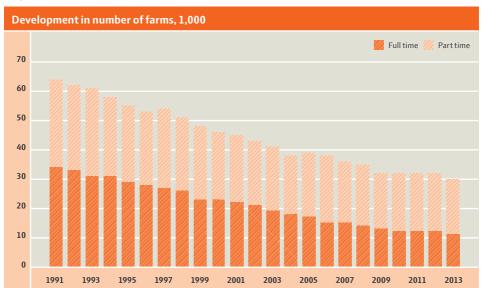
The total area of forage crops is expected to increase in 2011 due to a rise in grass areas in rotation and maize for silage. Wholeseed grain areas are also expected to increase despite a slightly higher yield of feed units per hectare for maize.



#### Fewer farms with cultivated land

Overall the number of farms is decreasing in Denmark. Recent deviations from this tendency are mainly due to new procedures for compilation of statistics. Especially the number of farms in the size range 0-5 hectares decreased in 2013, whereas the number of farms between 20-30 hectares rose by 23.4 percent. Consequently, the average farm size grew slightly to 67.7 hectares per farm. This tendency is in accordance with the continued structural development of production being concentrated on fewer, larger farms. The number of both full-time and part-time farms is decreasing in 2013. Full-time farms are defined as farms requiring work equal to one full-time position or more

Figure 1



## Decreasing horticultural businesses

In 2009, there were 1,360 horticultural businesses in Denmark. The horticultural sector is subject to the same structural tendency of consolidation into fewer and larger units.

#### Animal stock

Animal production in Denmark has followed the overall structural tendency towards fewer, larger farms. Simultaneously, farms have become more specialized, focusing on one type of animal production. In 2013, only 2 percent of Danish farms had both cattle and pigs. In recent years, pork production has increased its share of the total livestock production, and herds have increased in size. 88.5 percent of Danish pigs are kept on farms with herds of more than 2,000 pigs.

Table 4

Livestock numbers in May/June, 1,000					
	2009	2010	2011	2012	2013
Cattle, total	1,540	1,571	1,568	1,607	1,615
of which dairy cows	563	568	565	587	582
suckler cows	96	101	99	97	97
Pigs, total of which sows	12,369	13,173	12,932	12,331	12,076
	1,088	1,117	1,063	1,011	977
Sheep	104	160	144	154	151
Hens more than ½ year old	3,280	3,900	3,815	3,958	4,646
Young chickens	15,944	14,184	14,392	14,216	14,335
of which broilers	14,787	12,836	12,528	12,576	13,215
Turkeys	165	201	212	435	250
Ducks	208	224	230	103	101
Geese	10	7	7	4	8
Mink, breeding females	2,735	2,698	2,754	2,948	3,123





#### Fewer suckler cows

There is a long-term tendency towards a decrease in the number of suckler cows. In 2013, the total of suckler cows was 97.000.

#### Fewer pigs

The pig sector is characterized by a high degree of specialization and growing sizes of production units. Around 60 percent of pigs are on farms with more than 5,000 pigs. The average number of pigs per pig farm was 3,128 in 2013. The total pig population was 12,076,000 in 2013, corresponding to a decrease of 2 percent from the previous year.

Table 5

Changes in the structure of pigherds									
	2000	Pigherds, tota 2012	l 2013	Percent of total pigherds 2000 2012 20					
Number of pigs in the herds: 1-49 50-99 100-499 500-999 1.000-1.999 2.000-4.999 5000 and more	18.0 8.2 24.8 18.0 18.0 11.5	14.8 2.6 6.8 10.6 16.1 30.0	11.2 1.9 7.3 10.1 17.8 30.9 20.8	0.4 0.6 7.4 14.4 28.3 37.2	0.1 0.0 0.7 2.7 8.3 33.5 54.7	0.0 0.0 0.7 2.4 8.3 32.0 56.5			
Total, percent	100.0	100.0	100.0	100.0	100.0	100.0			
Herds, total and pigs, 1,000 Pigs per farm	13,231 11,922 901	4,181 12,331 2,949	3,861 12,076 3,128						

#### Increasing stock of hens

The stock of hens was 4.6 million in 2013. Egg production has been subject to significant consolidation in recent years, partly driven by the egg packers' wish to rationalize the collection of eggs from producers.

#### More broilers

The stock of broilers was 13.2 million in 2013, increasing by 5 percent from 2012. Broiler production is concentrated on a few large units, and the majority of farms have more than 25,000 broilers.

Table 6

Size of livestock production, million Kg.						
	2000	2009	2010	2011	2012	2013
Milk production, total	4,720	4,814	4,909	4,881	4,995	5,105
Butter	46	37	34	37	39	43
Cheese	306	321	292	275	303	323
Beef and veal	171	137	142	145	138	139
Pork	1,748	1,898	1,974	2,008	1,902	1,896
Poultry	205	179	193	189	188	191
Eggs	63	61	63	66	67	69
Fur skin, 1,000 picies	11,000	14,000	14,000	15,000	15,800	17,200







## Decreasing stock of turkeys

The past years saw an overall decrease in the stock of ducks, geese and turkeys. The stock of ducks decreased by 2 percent to 101,000, and the stock of turkeys decreased by almost 43 percent to 250,000. In 2013, the stock of geese rose by 100 percent to 8,000.

## More sheep in Denmark

The stock of sheep has generally increased since 2006. However, an increase of 53 percent to 160,000 sheep was recorded in 2010 due to new compilation methods for the number of animal farms. Due to this the number of sheep has been higher the following years, yet a slight decrease was recorded in 2013.

## Increasing mink stock

The mink stock increased by nearly 6 percent to 3.1 million breeding animals in 2013. Mink farms are geographically concentrated in the Western regions, with more than half of the farms located in the northern and western part of Jutland.

#### Agricultural production

After a high level in 2012, vegetable production decreased by 3 percent to 165,000 million tonnes in 2013. Conversely, animal production in such areas as dairy, beef and poultry increased in 2013.

#### Decreasing vegetable production

After a good harvest of 9.4 million tonnes of grain in 2012, yield decreased to 9.0 tonnes in 2013. The decrease can mainly be attributed to significant decreases in the output of two of Denmark's major cereal types: winter wheat and spring barley. Production of winter wheat decreased by 9 percent from 2012 to 2013, and spring barley decreased by 2 percent, whereas the production of rye and winter barley went up by 37 percent and 4 percent, respectively.

In 2013 the production of fodder sugar beets rose by 26 percent, while beets for production decreased by 25 percent. Production of rape rose by almost 42 percent in 2013, whereas the production of potatoes and pulses remained stable in the same period.

FACTS AND FIGURES PAGE 19 CHAPTER 1

#### AGRICULTURAL PRODUCTION

Table 7

Crop yield in Denmark					
	2000	2010	2011	2012	2013
Yield, 1,000 tons: Winter wheat Spring wheat Rye Triticale Winter barley Spring barley Oats and mixed grain Grain maize	4,651 43 263 244 816 3,164 233	4,996 64 255 177 784 2,198 274	4,746 86 294 138 724 2,526 225 55	4,371 154 384 115 649 3,410 303 75	3,997 148 527 74 677 3,273 313 76
Cereal, total	9,413	8,748	8,794	9,460	9,085
Pulse, total	138	34	27	27	25
Gathered straw, total	3,699	3,307	3,275	3,670	3,165
Winter rape Spring rape	263 32	577 3	504 4	481	684 4
Rape, total	294	580	508	485	688
Potatoes Beets for production Fodder sugar beets	1,645 3,345 1,153	1,399 2,409 276	1,620 2,700 284	1,664 2,649 266	1,646 1,994 335
Root crops, total	6,143	4,084	4,604	4,579	3,975
Lucerne Maize for silage Cereal for silage Grass and clover in rotation Grass outside rotation After-grass from grain and whole crops	332 2,105 2,360 10,368 3,989 2,878	339 6,153 1,109 14,584 3,426 515	348 6,765 1,141 15,660 3,302 554	281 6,250 1,032 15,783 3,474 438	232 6,897 1,137 13,565 2,812 470
Grass, green fodder and after-grass, total	22,031	26,126	27,769	27,259	25,114
Yield, mill. crop units (1) Grain, straw and pulses Root crops Lucerne for silage Grass field crops Maize for silage Whole crop (including catch crops) Rape	108.3 13.8 0.4 24.2 5.3 9.2 4.8	93.1 9.0 0.5 27.9 16.3 6.1 9.9	93.4 10.2 0.5 29.8 17.9 6.0 8.7	100.1 10.2 0.4 29.7 16.6 6.1 8.3	95.3 8.9 0.3 26.2 18.3 5.1 11.7
Crop yield, total mill. (2)	166.0	162.7	166.4	171.3	165.8

Note 1: 1 crop unit = 100 feed units.

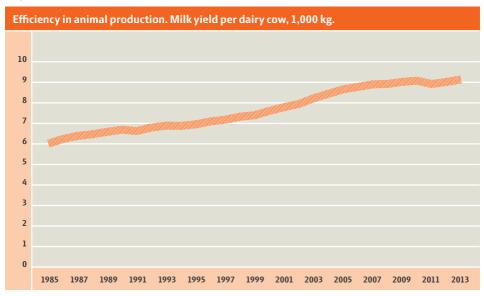
Note 2: Excl. seeds for sowing and horticultural products.



#### Stable animal production

Around 80 percent of Denmark's grain and plant production is utilized as feedstuff in animal production, mainly for pigs and cattle.

Figure 2



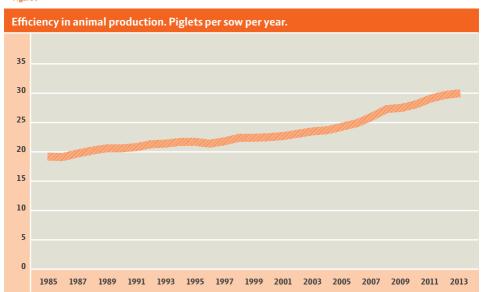
Source: Knowledge Centre for Agriculture.

"Over the last three decades productivity has almost doubled in the pig production."

Until 2015, the total milk production will be regulated by the EU milk quota. In 2013, milk production was 5,105 million kilograms. The Danish cattle stock has been approximately halved since the introduction of the milk quota in 1984 while yield per animal has increased. In 1984, a dairy cow produced an annual average of 5,900 kilograms of milk, whereas the yield today is 9,138 kilograms. Production of beef and veal was 139 million kilograms in 2013, up 1 million kilograms from 2012. The increase of yield per animal has led to a decrease in the number of slaughter animals over the years. This tendency reversed with a slight increase in 2012 and 2013.

Pork production reached a total of 1,896 million kg in 2013 remaining nearly stable from 2012 production. The slaughtering of pigs decreased by almost 2 percent to 18.6 million pigs in 2013





Source: Knowledge Centre for Agriculture.

#### AGRICULTURAL PRODUCTION

Increased productivity in pig production is evident in the increased production of piglets per sow per year. The average number of pigs produced rose to 30 in 2013. Over the last three decades productivity has almost doubled, although there is a significant variation in the producers' ability to increase productivity.

In 2013, the total production of poultry rose by 1.9 percent to 191 million kg. Hens are no longer slaughtered in Denmark, but are sent to Germany or used for feedstuff in mink production. The production of eggs was 69 kg in 2013, corresponding to an increase of 3 percent from 2012. Most eggs are sold to Danish consumers who prefer freshly produced Danish eggs for food safety reasons. Imported eggs are mainly used for industrial purposes.

Mink production increased to 17.2 million kg in 2013, corresponding to an increase of 9 percent from 2012. More than 90 percent of Danish mink skins are exported, mainly to China where they are processed and reexported or sold domestically.

"total production of poultry **increased by 11 percent** to 219 million kg."

Table 8

Number of slaughterings in slaughterhouses, 1,000								
	2000	2009	2010	2011	2012	2013		
Adult cattle and calves	580	493	514	488	491	491		
Sows and boars	449	410	437	470	422	426		
Porkers (young pigs)	17	10	9	12	10	12		
Hogs (bacon pigs)	20,284	18,885	19,667	20,392	19,027	18,668		
Chickens	133,987	100,464	108,404	106,217	101,110	107,573		

Source: Statistics Denmark.

## High ratio of production vs. consumption

For most agricultural products Denmark has a high degree of self-sufficiency. The ratio is highest for pork, but categories such as poultry, cereals and dairy products also represent far more than 100 percent self-sufficiency. Among all major categories only the consumption of beef, veal and eggs exceeds domestic production.

PAGE 25 | CHAPTER 1





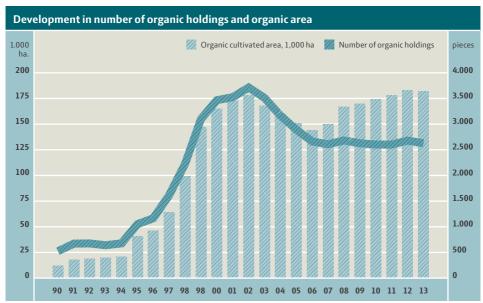
Retail turnover measured in value as well as quantity of organic foods has increased steadily in the past decade and the market share of organic food has risen to 8.0 percent in 2013. Vegetables, fruits, eggs and dairy are the most widely consumed organic categories.

In 2013, Denmark had 2,627 authorized organic farms. The area used for organic production was around 181,000 hectares, which means that almost 7 percent of the total agricultural area is cultivated organically. While the organic cultivated area remained stable from 2012 to 2013, the number of farms decreased by 53 farms compared with the previons year, corresponding a fall of 2 percent. While organic farms are subject to the general tendency towards fewer, larger farms, they deviate from the national ave-rage with a larger proportion of small (below 5 hectares) and medium-sized farms. This is partly due to the fact that organic farms often specialize in products with limited market potential compared to conventional products.

The largest organic sector is vegetables with organic products corresponding to around 20 percent of the total vegetable production. The production of organic eggs is around 17 percent of the total production of eggs, while 10 percent of the total milk production is organic.

"Almost 7 percent of the total agricultural area is **cultivated organically.**"

Figure 4



Note: The calculation method has been changed from 2005.

Source: The Danish Plant Directorate.

# **Exports**

The value of Danish food cluster exports has risen steadily in recent years and reached 156 billion Danish kroner in 2013, or 25 percent of the total exports from Denmark.

Of this amount, food accounted for 107 billion Danish kroner, biobased products for 37 billion Danish kroner and agro-technology for 12 billion Danish kroner.

EU export subsidies have been phased out and account for only 0.2 percent of the value today, compared to 12 percent in 1990. EU markets account for most of Danish export, led by Germany which alone accounts for 18 percent. High prices on fur skin in recent years have contributed to an increase in the value of exports to China including Hong Kong to 17.7 billion Danish kroner. In terms of value, China is now the second largest market for Danish agricultural products.



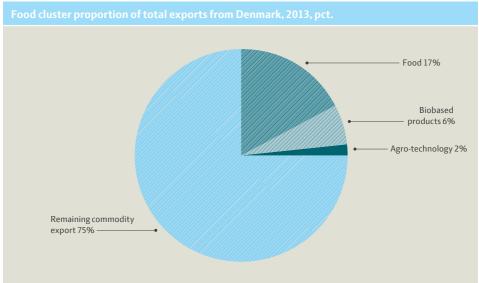
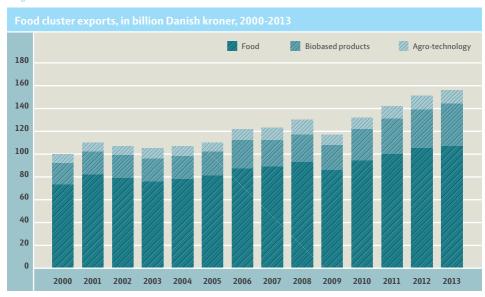


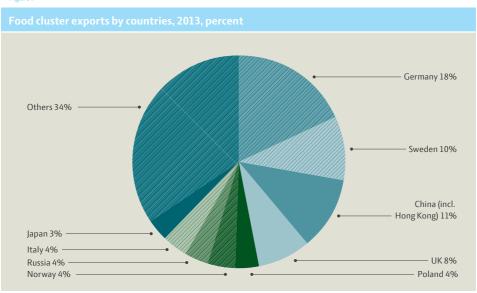


Figure 6



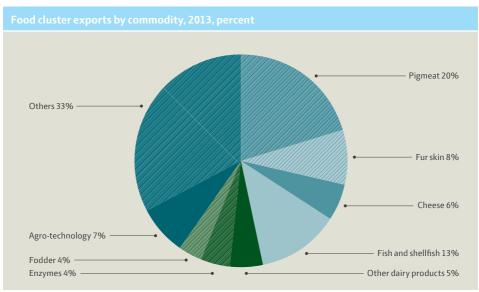
Source: Statistics Denmark.

Figure 7



"Denmark is **among the top EU countries** when it comes to up-market exports."

Figure 8



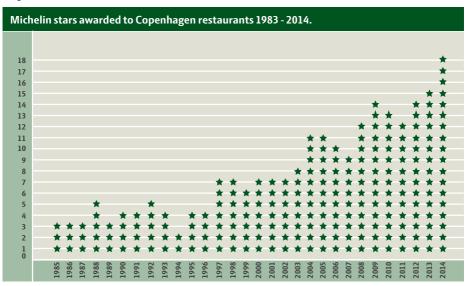
Source: Statistics Denmark.

PAGE 33 | CHAPTER 3

# Gastronomy

New trends in Scandinavian gastronomy have propelled Danish chefs and food products to international fame. In 2014, Restaurant Noma in Copenhagen was selected as the world's best restaurant for the fourth time. Also in 2011 the Danish chef Rasmus Kofoed won the Bocouse d'Or, widely recognized as the world's most prestigious award for chefs. Although there is still no Michelin guide covering all of Denmark, Copenhagen restaurants have steadily increased their number of Michelin stars since the Danish capital appeared in the guide Main Cities of Europe 1983. However, the Michelin guide will cover all of Denmark from 2015 with the introduction of the Nordic Michelin guide.

Figure 9



Source: Michelin Main Cities of Europe

"Copenhagen restaurants have steadily increased their number of Michelin stars."



The Danish Agriculture & Food Council is a trade association representing agriculture, the food and agro industries. With annual exports in excess of DKK 156 billion and with 169,000 employees, we represent one of Denmark's most important business sectors. Through innovation and promotion of the industry's contribution to society, we work to ensure a strong position for our members in Denmark, as well as in international markets.

