

# Documentation of statistics for Slaughter Animals and Meat Production 2017



## **1** Introduction

The purpose of these statistics are to show changes in the size and value of total production of animals for slaughtering and meat analyzed by use. The statistics have a long history and the key figures covering the past 100 years are comparable. During the 1920s and 1930s the statistics were improved and since the Second World War there has been adequate statistics in this area.

## **2 Statistical presentation**

The statistics provide information of slaughtered animals cover all slaughtered animals by Danish slaughterhouses distributed by cattle, pigs, sheep and lambs, poultry, horses and game. The statistics are broken down by category of animals. To this is added the external trade statistics providing data on live animals. The figures on production only cover meat for human consumption. The statistics also provide data on a wide range of prices and price quotations. The statistics are only calculated for Denmark as a whole.

## 2.1 Data description

The statistics on slaughtering of animals cover all slaughtered animals by Danish slaughterhouses distributed by cattle, pigs, sheep and lambs, poultry, horses and game. The statistics are broken down by category of animals. To this is added the external trade statistics providing data on live animals. The statistics provide information on the number of slaughtered and live animals exported and meat production (the quantity of edible meat in kg).

Statistics on livestock received by offal destruction plants are also compiled, but are excluded from the figures covering production and slaughtering as the figures on production only cover meat for human consumption.

The statistics also provide data on a wide range of prices and price quotations. For example, average prices per kg slaughtered weight and the sales value in DKK million for each category of livestock.

The information is given in the form of totals and time series - for main products data compiled monthly or otherwise quarterly and annually. Data on actual quantities are given, and prices and values are estimated and are included in the product value of agriculture.

The current statistics attach importance to the circumstance that quantity and price data are disseminated monthly and/or quarterly. Monthly data are disseminated via Stat Bank Denmark and quarterly via the publications "Jordbrugets prisforhold" and "Animalsk produktion".

## 2.2 Classification system

The statistics on slaughtering of animals cover all slaughtered animals by Danish slaughterhouses distributed by cattle, pigs, sheep and lambs, poultry, horses and game. The statistics are broken down by category of animals. To this is added the external trade statistics providing data on live animals. The statistics provide information on the number of slaughtered and live animals exported and meat production (the quantity of edible meat in kg).

## 2.3 Sector coverage

Agricultural sector.



#### 2.4 Statistical concepts and definitions

Pigs: - Pigs, total - Small pigs - Sows - Boars - Pigs for slaughtering - For producers

Cattle: -Cattle, total - Full grown cattle, total - Calves, total - Male animals - Bulls - Young bulls - Steers - Heifers - Cows - Fat calves - Sucking calves

Poultry: - Poultry, total - Chickens - Hens - Ducks - Geese - Turkeys - Other poultry - Slaughtering at producers

Other: - Horses - Sheep - Lambs

## 2.5 Statistical unit

The units are number of animals, the average slaughter weight and the average price per kilo of the animal. The production are in million kilo and the sales value are in million Danish kroner.

#### 2.6 Statistical population

All livestock in Denmark, as horses, cattle, pigs, sheep and lambs, poultry and game.

#### 2.7 Reference area

Denmark.

#### 2.8 Time coverage

There are data from 1990 for the yearly data and from 1995 for the monthly data.

#### 2.9 Base period

Not relevant for these statistics.

#### 2.10 Unit of measure

The units are number of animals, the average slaughter weight and the average price per kilo of the animal. The production are in million kg and the sales value are in million Danish kroner.

The information is reproduced as summer and time series - for the main products in months and otherwise on quarters and annually. Actual quantities and calculated prices have been given as well as values that are included in the agricultural production value. Both volume and price indices have been prepared. Index is calculated based on a base year, which is replaced at 5 years apart. The most recently used base year is in 2010.

#### 2.11 Reference period

Calendar month and calendar year.



## 2.12 Frequency of dissemination

Statistics are published monthly for slaughter, export and values for cattle, pigs, lamb and sheep. For poultry, quarterly figures are published. Game is only published annually. For all are published annually statistics.

## 2.13 Legal acts and other agreements

Law on Statistics Denmark §8 secures the legal ground for collecting the data.

The statistic falls under EU Regulation (EC) No 1165/2008 of the European Parliament and of the Council of 19 November 2008 concerning livestock and meat statistics.

## 2.14 Cost and burden

The response burden is very low as the data are collected from mainly existing sources.

## 2.15 Comment

Other information is available please contact Statistic Denmark.

## **3 Statistical processing**

The statistics on slaughtering of animals cover all slaughtered animals by Danish slaughterhouses distributed by cattle, pigs, sheep and lambs, poultry, horses and game. The statistics are broken down by category of animals. To this is added the external trade statistics providing data on live animals. The statistics provide information on the number of slaughtered and live animals exported and meat production (the quantity of edible meat in kg). The figures on production only cover meat for human consumption. The statistics also provide data on a wide range of prices and price quotations.

## 3.1 Source data

The primary data are collected from a wide range of sources. The important data providers are public institutions, trade and industry organizations Ministry of Environment and Food of Denmark <u>Danish Veterinary and Food Administration</u> and specifically selected private business enterprises (Danish Agriculture and Food).

Data on external trade are extracted from Statistics Denmark's external trade statistics and data are also received from the Agricultural Tax Funds.

## 3.2 Frequency of data collection

Data are collected both weekly, monthly, quarterly and yearly.



## 3.3 Data collection

Statistics Denmark compiles statistics on meat with regard to slaughtering of animals on the basis of figures from the Danish Food Industry Agency and the Danish Agriculture and Food (Danish Agriculture and Food is a joint professional and administrative unit for the sector of Danish pork, beef, poultry meat and eggs) providing information on the total number of slaughtered animals at Danish slaughterhouses and abattoirs, while exports of slaughtering of live animals are compiled in the official Danish external trade statistics, supplemented by information from duty funds in agriculture. Slaughtering of animals at producers is roughly estimated.

## 3.4 Data validation

All data are controlled with data from earlier periods.

## 3.5 Data compilation

#### **Production of meat**

The production of meat is estimated on the basis of the number of slaughtered animals and average slaughtered weight for each category of animals. The total production of meat comprises meat from recognized slaughtering and the production of edible offal.

The production with regard to poultry meat is compiled as ready-to-cook weight.

The production of edible fat, which is not contained in the production of meat, is also compiled.

Game and rabbit meat are excluded from the statistics on production and production value of meat, the production of game corresponds roughly to the consumption. The importance of the production and consumption of rabbit meat in Denmark is very low.

#### Prices and values

The value of slaughtering is in Denmark compiled on the basis of the quantities produced and the average producer prices that have been achieved. Furthermore, amounts from any schemes with direct payment to the producer on the basis of the production are also included. After 1995, EU grants for cattle and sheep are excluded from the calculation of production values. For exports of live animals, export values (fob) minus costs involved in the sale and transport of animals are applied.

#### **Beef and veal**

The production of beef and veal comprises recognized slaughtering at slaughterhouses and abattoirs, exports of slaughtered live animals and slaughtering at the producers. The total number of slaughtering at slaughterhouses and abattoirs is compiled by the Danish Meat Association.

In connection with the weekly data reports forwarded by the Danish slaughterhouse to the Danish Meat Association, comprising 100 pct. of recognized slaughtering, Statistics Denmark receives information on the number of slaughtered animals as well as slaughtered weight the selected groups of animals. On 1 January 1974 and 1 January 1994, the grouping of animals for slaughtering and the definition of slaughtered weight was changed in accordance with EU Council Directives (73/132/EEC) and (93/24/EEC) and Commission Decisions (73/262) and (94/433). The latest amendment as of 1 January 20098 (EU Regulation (EC) Nr. 1165/2008) has only resulted in minor changes.



Animals under 300 kg live weight are regarded as calves. Until 1994, this limit was 220 kg.

During the period 1974-1993, kidneys and kidney fats are included in the weight of carcase, while they are in the period prior to and after 1974-1993 included in edible offal and edible fats, respectively. Edible offal, i.e. livers, hearts, kidneys, tongues, midriffs, head meat, tails, omentum and sweetbread are estimated to reach about 7 pct. of the slaughtered weight.

For exports of live cattle for slaughtering, the meat production is estimated on the basis of the live weight of the animals and a from the slaughtering at the slaughterhouses percentage of the slaughtering for each category of animals in question.

From 1995 live imports for slaughtering has been offset.

The production of edible offal is estimated in the same way as slaughtering at the slaughterhouses.

From 2015 slaughtering at the producers has been estimated to reach 4,000 units by Statistics Denmark. About 1,500 bulls and bull calves, about 1,000 heifers and cow calves and about 1,500 cows. This results in a total of 1.0 mio. kg. In the period 2005 to 2014 slaughtering at the producers has been estimated to reach 6,000 units by Statistics Denmark. About 2,000 bulls and bull calves, about 2,000 heifers and cow calves and about 2,000 suckler cows. This results in a total of 1.2 mio. kg.

#### Prices and values

Average prices of cattle for slaughtering at the producer and the price quotation for cattle for slaughtering and breeding cattle are provided. For exports of live cattle, the export value (fob) is applied as 20 pct. for breeding animals and 7.5 pct. for slaughtered animals are deducted.

For slaughtering in Denmark, the value is estimated separately for each individual category of animals by applying prices to the producers and weighing of these prices in relation to the classification of animals. Moreover, the amounts, which have been paid directly to the producers on the basis of production, are included. In addition to the direct settlement, a deferred payment has usually been granted.

From 2005, the EU reform implies that most existing premiums have been changed to the one-off payment scheme. The only production-dependent EU grants from 2005 are the male-animal premium, which is reduced by 25 pct. in relation to the 2004 level. The premium values are given in Statistics Denmark's annual publication Landbrug "Agricultural Statistics".

#### Pork

The production of pork comprises recognized slaughtering at slaughterhouses and abattoirs, exports of live slaughtered animals (including piglets) and slaughtering at producers.

Data on the total number of slaughtering at slaughterhouses and abattoirs are reported by the Danish Veterinary and Foodstuffs Directorate, which are distributed by the following categories: pigs, sows, boars, pigs for slaughtering, young female pigs, for producers (pigs which are to be returned to the producer) and discarded pigs.

Data on the stock of pork are forwarded to Statistics Denmark 4 times every year.

Data on average settlement weights are submitted by the Federation of Danish Pig Producers and Slaughterhouses. The settlement weight reflects the weight of the warm carcase converted into cold slaughtered weight, which accounts for 98.2 pct. of the settlement weight. The slaughtered weight excludes edible offal.

The production of pork, exclusive of edible offal, is estimated on the basis of the average slaughtered

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weight and the number of pigs. The production of edible offal which comprises livers, hearts, kidneys, tongues and midriffs is estimated as 4.25 pct. of the slaughtered weight until 2004 and after 2005 4 pct. is applied.

Data on imports and exports of pigs and pork are compiled by means of extracts from Statistics Denmark's official external trade statistics, supplemented by information from duty funds in agriculture.

For exports of live pigs for slaughtering, the meat production is estimated on the basis of the live weight of the animals and an average exercise rate of 79 pct., which is inclusive of edible offal. The live exports of pigs comprise mainly piglets. In 2007, exports reached 81 pct.

The number of slaughtered animals at the producers is roughly estimated by Statistics Denmark and comprises home slaughtering only, as the slaughtering for own consumption, which on behalf of the producer is carried out at the Danish slaughterhouses, is included in the statistics on slaughtering compiled by the Danish Veterinary and Foodstuffs Directorate. From 2005 the number of slaughtered animals at the producers is fixed at 24,000 pigs annually (corresponding to 1.8 mio. kg of meat), while the number was previously fixed at 220,000 pigs (corresponding to 16.5 mio. kg of meat).

#### Prices and values

For slaughtered pigs the price quotation of the cooperative slaughterhouses is given, which is a weighted average fixed on a weekly basis. The price quotations are fixed per warm kg of slaughtered weight (settlement weight). Within the weight interval 50 - 109.9 kg of slaughtered pigs paid is settled from a basic price quotation with a varying fixed weight interval (about 70 pct. of the slaughtered pigs), and outside the weight interval of the basic price quotation, weight reductions are undertaken. Prices for pigs are regulated in accordance with the meat percentage. In the case of pigs with a sickness file, allowance for deductions is taken. In addition to the price quotation a deferred payment is usually granted.

The average of price quotations for slaughtered sows, breeding pigs and piglets are given for producer prices of pigs.

For exports of live pigs, the export value (fob) is applied, as 15 pct. is deducted from this value for covering the costs involved in sale and transport of the animals.

For slaughtering in Denmark, the value is separately estimated for 7 groups of animals. The value of slaughtered pigs and sows is estimated on the basis of the average settlement prices to the producers, inclusive of supplements of deferred payment, which are calculated by the Federation of Danish Pig Producers and Slaughterhouses.

In connection with settlement the deductions that have been made are adjusted. Furthermore, the amounts, which have been directly paid to the producers on the basis of the production, are included.

#### **Poultry meat**

The statistics show data on the total number of slaughtering at the poultry slaughterhouses in units and ready-to-cook weight in addition to a classification of the categories: slaughtered chickens, hens, ducks, geese and turkeys. Ready-to-cook weight is analogous with the slaughtered weight of the other species of animals.

Statistics on slaughtering and production (ready-to-cook) of poultry meat at the authorized poultry slaughterhouses and sales on the domestic market, exports and stock changes are compiled by the Danish Poultry Council, which prepares production statistics on the basis of data reported from



each individual poultry slaughterhouse. The data reported concerning slaughtering, production and exports are distributed by the different species of poultry. Imports of live poultry meat are compiled by Statistics Denmark in the official external trade statistics.

Data on the slaughtering of poultry at the producers are from 2005 and are estimated at 1.4 mio. kg annually by Statistics Denmark and comprise own consumption of the producers as well as sales directly to the consumers. The figure was previously 5.1 mio. kg.

Statistics on exports and imports of slaughtered poultry distributed by meat of hens and chickens, ducks, geese and turkeys and slaughtered offal are also compiled by Statistics Denmark. The quantities stated are the actual exported quantities in terms of product weight.

#### Prices and value

Data on weekly price quotations for slaughtered chickens are collected, which are fixed weekly by private poultry slaughterhouses. The quotation excludes supplements and deductions. For exports of live poultry, the export value (fob) is applied, as 15 pct. are deducted from this value for costs involved in sale and transport of the animals.

For slaughtering in Denmark, the value is estimated separately for groups of poultry (chickens for slaughtering, hens, ducks, geese and turkeys) on the basis of producer prices of the cooperative poultry slaughterhouses (quotations + supplements deductions) and a weighing in relation to the classification. These prices are per kg of live weight, but are converted to apply for the ready-to-cook weight in which the production is estimated.

#### Sheep and lamb meat

Slaughtering and meat production comprise partly slaughtering at slaughterhouses and abattoirs partly exports of live animals for slaughtering. Slaughtered animals for consumption by the producers are excluded from the figures. About 65 pct. of the slaughtering is carried out in the second half of the year.

The production of sheep and lamb meat is estimated on the basis of data reported by the Danish Food Industry Agency concerning slaughtering of sheep and lamb and by duty funds in agriculture concerning exports of live animals.

#### Prices and value

The value of slaughtering in Denmark is estimated on the basis of the slaughtered value and price quotations for sheep and lamb (sales value ex farmer) fixed by the Danish Livestock and Meat Board. For exports of live animals, the export value (fob) is applied as 15 pct. are deducted from this value for costs involved in sale and transport of the animals. The value of sales of wool is roughly estimated. The ewe premium is excluded from the sales values, in 2006 the ewe premiums reached DKK 5.7 mio and in 2007 DKK 4.9 mio.

**Horse meat** The total production of horse meat comprises recognized slaughtering in Denmark and exports of live horses for slaughtering. The production of meat from slaughtering in Denmark is estimated on the basis of the total number of slaughtered horses and foals and an overall fixed average slaughtered weight for horses and foals of 300 kg per animal. For exports of live horses for slaughtering, the meat production is estimated on the basis of the live weight of the animals and a slaughtering rate of 48 pct.

#### Prices and value

The value of slaughtering in Denmark is estimated on the basis of a fixed average live weight of 625 kg per animal and price quotations for horses for slaughtering by the Danish Board of Horse



Slaughterhouses. For exports of live animals, the export value (fob) is applied as 15 pct. are deducted from this value for costs involved in sale and transport of the animals.

## 3.6 Adjustment

The last data can be provisionally, so there can be some small adjustment in these.

## 4 Relevance

The purpose of these statistics are to show the size and value of the production of animals for slaughtering and meat production.

#### 4.1 User Needs

The most important users are particular EU, DG-AGRI, the ministries, the farmer's organizations, but also students and interested people in general.

## 4.2 User Satisfaction

There are no examination of the uses satisfaction, but the impression is, that most users are satisfied with the statistics.

#### 4.3 Data completeness rate

The statistics follow the requirement in the i EU-regulation 1165/2008 Statistically over livestock and meatproduction.

## 5 Accuracy and reliability

The calculations of prices and values are based on partly actual prices on account and partly estimates of the expected deferred amounts paid out by the producer cooperatives and are not realized until the end of the year and thereby may give rise to minor time lags.

#### 5.1 Overall accuracy

Detailed statistics are compiled for quantities of slaughtering. The data on prices and values may be subject to minor time lags.

## 5.2 Sampling error

Not relevant for these statistics.

#### 5.3 Non-sampling error

There may be a smaller periodic displacement.



## 5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

#### 5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

#### 5.6 Quality assessment

Detailed statistics are compiled for quantities of slaughtering. The data on prices and values may be subject to minor time lags.

#### 5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the <u>Revision Policy for Statistics</u> <u>Denmark</u>. The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

#### 5.8 Data revision practice

There is a negligible difference between provisional and final figures.

## 6 Timeliness and punctuality

The statistics are usually published without delay in relation to the scheduled date. Publication of August 2017 the numbers were postponed 10 days as registry data was delayed due to missing reports to the registry.

#### 6.1 Timeliness and time lag - final results

The monthly tables in Stat Bank Denmark are compiled the 15 every month and the figures is from the previous month. As an example data from January month are publish the 15 March.

#### 6.2 Punctuality

The statistics are usually published without delay in relation to the scheduled date. Publication of August 2017 the numbers were postponed 10 days as registry data was delayed due to missing reports to the registry.



## 7 Comparability

Every month and year figures are submitted to the statistical office of EU, Euro stat. Data for all EU countries can be found at Eurostat homepage. The statistics are produced following the principles of an EU regulation, so the results are comparable.

## 7.1 Comparability - geographical

Every month and year figures are submitted to the statistical office of EU, Euro stat. Data for all EU countries can be found in <u>Eurostat</u>

## 7.2 Comparability over time

For main results long data time series can be compiled. Over the years minor definitional changes have been made, e.g. kidneys and kidney fats are now classified to edible offal. However, it will be possible to conduct some calculations on the basis of a common denominator.

## 7.3 Coherence - cross domain

The trade organization, e.g. Danish Slaughterhouses compiles comprehensive statistics and some statistics are published by business enterprises.

## 7.4 Coherence - internal

The statistics are coherent and free from contradictions

## 8 Accessibility and clarity

These statistics are published quartly in a Danish press release, at the same time as the tables are updated in the StatBank. Annual figures are included in <u>Statistical Yearbook</u> and <u>Statistical Ten-Year review</u> Old data are included in yearly publication <u>Landbrug</u> (Explaining, methodological text is only in Danish) and <u>Landbrugsstatistik 1900-1965</u>

## 8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

## 8.2 Release calendar access

The Release Calender can be accessed on our English website: <u>Release Calender</u>.

## 8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.



## 8.4 News release

There are not an individual press releases for this data.

## 8.5 Publications

Annual figures are included in **Statistical Yearbook** 

## 8.6 On-line database

The statistics are published in the StatBank under the subject in the following tables:

- <u>ANI41</u>: Slaughterings and production of cattle by category, unit and time
- ANI5: Slaughterings and production of pigs by category, unit and time
- ANI4: Slaughterings and production of cattle by category, unit and time
- <u>ANI6</u>: Slaughterings and production of poultry by category, unit and time
- ANI51: Slaughterings and production of pigs by category, unit and time
- ANI61: Slaughterings and production of poultry by category, unit and time
- <u>ANI9</u>: Slaughterings and export by category, unit and time

## 8.7 Micro-data access

There is no micro-data access.

## 8.8 Other

Data for all EU countries can be found in the <u>Eurostat database</u>.

## 8.9 Confidentiality - policy

Data Confidentiality Policy at Statistics Denmark.

## 8.10 Confidentiality - data treatment

When compiling statistics, primary registry data is used, which is displayed throughout the country and not for regions and regions.

## 8.11 Documentation on methodology

See various passages in the yearly publication <u>Agriculture</u> (Explaining, methodological text is in Danish only).

## 8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## 9 Contact

The administrative placement of these statistics are in the division of Food Industries. The person responsible is Mona Larsen, tel. + 45 39 17 33 99, e-mail: mla@dst.dk

## 9.1 Contact organisation

Statistics Denmark

#### 9.2 Contact organisation unit

Food Industry, Business Statistics

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