

**Documentation of statistics for  
Cattle 2018**

## **1 Introduction**

The purpose of these statistics is to describe the stock of cattle in Denmark. The statistics are i.e. used for forecasts of future slaughtering of cattle. The cattle stock have been estimated since 1946, but these statistics are in its current form comparable from 2008 and onwards.

## **2 Statistical presentation**

These statistics are a quarterly measurement of the total number of cattle in Denmark. The number of cattle are divided into groups of bulls and steers, heifers and cows, based on information collected from administrative registers. The cattle stock is also divided by geographic province.

### **2.1 Data description**

The statistics on herd of cattle shows the total number of cattle in Denmark. The survey is carried out quarterly on the last day in the quarter. Information is collected from two registers: the Central Register of Livestock and the Register of Cattle, where all cattle are registered with an individual number. The number of cattle is divided into male and female animals according to their age. Cows are divided into dairy cows and cows kept for suckling. The data are distributed geography into provinces.

## 2.2 Classification system

The herd of cattle is divided into three main groups; Bulls and steer, Heifer and Cows. Under these groups, the herd of cattle is divided by sex in male and female cattle. The complete division of cattle into groups are:

### Bulls and bullocks

- Bulls and bullocks calves not over 1/2 year
- Bulls and bullocks calves aged 1/2 - 1 year
- Bulls and bullocks calves total
- Bulls and bullocks, 1-2 year
- Bulls and bullocks, 2 year or more
- Bulls and bullocks, total

### Heifers

- Heifers calves not over 1/2 year
- Heifers calves 1/2-1 year
- Heifers calves total
- Heifer, 1-2 year, in calf
- Heifer, 1-2 year, total
- Heifer, 2 year or more, in calf
- Heifer, 2 year or more, total
- Heifer, total

### Cows

- Dairy cows
- Cows kept for suckling

All data are divided geographically:

- Region Hovedstaden (Landsdel København) and Nordsjælland samt Landsdel Bornholm)
- Region Sjælland
- Region Syddanmark (Landsdel Fyn and Landsdel Sydjylland)
- Region Midtjylland (Landsdel Østjylland and Landsdel Vestjylland)
- Region Nordjylland

Regions are divided into special agricultural provinces. It is chosen to show results for the provinces *København by, København omegn and Nordsjælland* as one province. Likewise is the provinces *landsdelene Østsjælland og Vestsjælland* considered as one province being identical with the region *Sjælland*. The region *Nordjylland* is not divided into provinces.

## 2.3 Sector coverage

Agricultural sector.

## **2.4 Statistical concepts and definitions**

**CHR number:** CHR number is the number, which the holding is registered in The Ministry of the Environment and Food Ministry's Central Animal Husbandry Register. Every single cattle has a unique ID-number in CHR.

**The Central Animal Husbandry Register (CHR):** CHR is the Danish Veterinary and Food Administration's database for the registration of herds and livestock. CHR was established in 1993. Read more about this on the website of the Ministry of the Environment and Food.

**Heifer in calf:** Heifer in calf is heifer declare in calf and heifers, which have been inseminate for more than 3 month after day of the survey.

**Cattle:** Cattle are defined as bovine animal, which means domestic animals of the species *Bos Taurus* and *Bubalus bubalus*, including hybrids like Beefalo.

**Cattle database:** The cattle database is a central database of cattle that contains data which are reported by the cattle users or transferred from among others. Cattle breeding associations, dairies, slaughterhouses, DAKA, ear-brand manufacturers and practicing veterinarians.

## **2.5 Statistical unit**

The units are number of bovine animals.

## **2.6 Statistical population**

All cattle in Denmark (this is the same as all cattle recorded in the Central Register of Livestock Farms on the reference date). It is a full-scale census.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

The statistics covers the period from first quarter 2008 and forward. Older data are described under *Comparability over Time*.

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

The unit of measure is number of cattle.

### **2.11 Reference period**

The surveys are carried out quarterly on the last day in the quarter (the 31 of March, the 30 of June, the 30 of September and the 31 of December).

### **2.12 Frequency of dissemination**

These statistics are published quarterly.

### **2.13 Legal acts and other agreements**

Law on Statistics Denmark §8 secures the legal base 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**

There is no response burden as the data are collected via registers (existing sources). The registers are administrated by Ministry of Environment and Food of Denmark and SEGES Landbrug & Fødevarer F.m.b.A.

### **2.15 Comment**

The cattle population has been regulated by the annual milk quotas until spring 2015. In order to stabilize and regulate the market for dairy products within the EU, annual milk quotas have been implemented in the period from 1984 until 1 April 2015. For each Member State, a production volume was set for which a profitable selling price was guaranteed. For additional production, a charge (super tax) of such a size was charged that this production was unprofitable.

## **3 Statistical processing**

Information is collected from two registers: the Central Register of Livestock and the Register of Cattle. In the Central Register of Livestock every single animal is registered with an individual number, birthday and sex and so on. These data are linked with data from the Register of Cattle about whether the heifers are with calf or not. When all data are validated, they are grouped by type, age and geography and so on.

### 3.1 Source data

Information is collected from registers.

- [The Central Register of Livestock](#) , which is administrated by the [Ministry of Environment and Food
- The Register of Cattle, which are owned and administrated by SEGES.

The Central Register of Livestock (CHR) has a variety of applications, where the main thing is veterinary, as help to health programs. Therefore the control with the information in the register is very high. In the register every single animal has an unit number (CKR number) which consists of a livestock number and an individual number inside the livestock. The register consists of information on among others birthdays, sex and used fore example dairy cattle and beef cattle.

The register is continuously updated by the farmer through the Register of Cattle about the increase- and/or departure of animals to the farm and information about supplier and buyer of the cattle. Furthermore the resignation of cattle for slaughtering are verified by the slaughterhouses and the dead cattle by the incinerating plant. More information about CHR can be find on Ministry of Environment and Food of Denmark see <https://chr.fvst.dk>.

The Register of Cattle is a comprehensive system which mainly serves the farmer in the daily work. Normally the farmer reports information to the Register of Cattle, and then relevant information is transformed automatic to CHR. The Register of Cattle thus updates CHR.

From the Register of Cattle information is received about the heifers age and about whether it is in calf (pregnancy).

### 3.2 Frequency of data collection

Data is collected quarterly.

### 3.3 Data collection

Data comes from administrative registers.

### 3.4 Data validation

The register data undergo a validation. Along with the data from CHR is a specification on the number of: Bulls and bullocks and also heifers distributed over groups on ages; dairy cows, cows kept for suckling, total cows and total cattle. After data compilation the estimated data are compared with the specification besides the data are also compare with last years data and recent quarter.

### 3.5 Data compilation

The herd of cattle is divided into male and female animals according to their age. Cows are divided into dairy cows and cows kept for suckling. The herd of cattle is classified to 12 sub-groups. The herd of cattle is divided geographically by province. There are 11 sub-groups.

### **3.6 Adjustment**

There is no corrections of data.

## **4 Relevance**

The cattle survey is of great interest to EU, the Ministry of Environment and Food, The Danish Association of Slaughterhouses and others farmer's organizations, but also students and interested people in general. The most important purposes of cattle surveys are to provide a basis base for forecasts of cattle for slaughter. The statistics are used in financially and environment studies.

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

### **4.1 User Needs**

The cattle survey is of great interest to EU, the Ministry of Environment and Food, The Danish Association of Slaughterhouses and others farmer's organizations, but also students and interested people in general. The most important purposes of cattle surveys are to provide a basis base for forecasts of cattle for slaughter. The statistics are used in financially and environment studies.

### **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**

This statistics affected by demands from EU in 1165/2008.

## **5 Accuracy and reliability**

It is a full-scale census. The greatest margin of uncertainty is linked to updating and matching the different registers.

### **5.1 Overall accuracy**

Data for the calculation of the cattle population originate from registers where it is mandatory for all cattle to be registered. There is therefore good reason to assume that the statistics are very accurate in terms of measuring the total legal stock of cattle. Cattle kept illegally are not included in the statistics, which is not expected to have any significant effect on the result.

### **5.2 Sampling error**

The number is based on a complete enumeration, hence the coefficient of variation is zero.

### **5.3 Non-sampling error**

The greatest uncertainty for this statistic is due to the lack of or late updating of the administrative registers that form the basis of the inventory. But it is considered very small, as it is mandatory to update within 7 days.

### **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**

The general assessment is that the quality of the statistics are high, because the quality of the registers is high. Because it is a compulsory register, where all cattle have to be registered.

### **5.7 Data revision - policy**

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

### **5.8 Data revision practice**

Only final figures are published.

## **6 Timeliness and punctuality**

The survey results are published quarterly. About 3 weeks after the survey day. The punctuality is high, with delays happening very rarely.

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

The survey results are published quarterly. About 3 weeks after the survey day. Only finally figures are published.

## **6.2 Punctuality**

These statistics are published without delay, with reference to the announced time of publication in the release calendar.

## **7 Comparability**

The survey is comparable from 2008 onwards, and there is a high degree of comparability with previous surveys. Furthermore there is high degree of comparability with other European countries, especially the EU countries.

### **7.1 Comparability - geographical**

Two time a year figures are submitted to the statistical office of EU, Euro stat. This includes special aggregates, not published nationally.

Data for all EU countries can be found in [Euro stat database](#) . The statistics are produced following the principles of an EU regulation, so the results are comparable.

### **7.2 Comparability over time**

From 2008 the population is all cattle in Denmark (this is the same as all cattle recorded in the Central Register of Livestock Farms on the reference date). It is a full-scale census.

Sample before 2010: The sample covers all farms drawn from the Register of Agricultural Statistics where at the same time could be found in the general livestock register. A ratio estimation is carried out.

In 1980 heifers were divided into two groups: heifers in calf and heifers not in calf. In 1976 calves were further divided into semi-annual groups. In 1974 the census method and the census groups were changed to comply with EC directives. The census groups were supplemented by an age classification, and cows were divided into dairy cows and cows kept for suckling. In 1946 the survey was extended to include all Denmark, compared to only rural municipalities previously.

### **7.3 Coherence - cross domain**

Every year Agricultural and Horticultural Survey is done and the number of cattle is estimated on the same level. But there are some difference: the Agricultural and Horticultural Survey is an estimate and it only included farms of at least 5,0 hectares. See the Quality Declaration for Agricultural and Horticultural Survey for more information.

### **7.4 Coherence - internal**

Not relevant for these statistics.

## **8 Accessibility and clarity**

These statistics are published semiannually in a Danish press release and quarterly in the Statbank table [KVAEG5](#). For further information, see the subject page for [Livestock](#).

### **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 Calendar can be accessed on our English website: [Release Calendar](#).

### **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**

These statistics are published semiannually in a Danish press release.

### **8.5 Publications**

These statistics are presented in the [Statistical Yearbook](#).

### **8.6 On-line database**

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

- [KVAEG5](#): Number of cattle by region, type and time

### **8.7 Micro-data access**

There is no micro-data access.

### **8.8 Other**

Data is transmitted to [Eurostat](#) on a semiannual basis. These data include aggregations which are not published nationally. Statistics for all EU-member states are available through Eurostat's statistical [Database](#).

### **8.9 Confidentiality - policy**

[Data Confidentiality Policy](#) at Statistics Denmark.

### **8.10 Confidentiality - data treatment**

These statistics are not published on a level of detail that necessitates confidentiality.

### **8.11 Documentation on methodology**

A methodological description of applied methods from 2000 to 2010, can be found in the report [Cattle Register - from administrative data to traditional statistics](#) by Mona Larsen, August 2006

### **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

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