

**Documentation of statistics for
The Supply and Use of Cereals and Feed 2016**

1 Introduction

The purpose of the statistics is to measure the annual use of feeds for animal production in agriculture and in particular show the use of cereals. The works include compiling supply balances.

The statistics have been compiled since 1900.

2 Statistical presentation

The supply and use of feed in agriculture are calculated on a crop year basis (July 1st. to June 30th.) for a wide range of feeding stuffs by compiling supply balance sheets.

There are several sources: Surveys on stocks and turnover at cereal traders and farmers are made specific for this statistic. Furthermore, data from other surveys in Statistics Denmark, in particular harvest statistics, production statistics and external trade statistics are used. Also specific information from a few firms are included.

2.1 Data description

The supply and use of feed in agriculture are calculated on a crop year basis (July 1st. to June 30th.) for a wide range of feeding stuffs by compiling supply balance sheets.

2.2 Classification system

A, 01.00.0, Agriculture and Horticulture.

2.3 Sector coverage

Agriculture, horticulture and fur animals.

2.4 Statistical concepts and definitions

Use of cereals The supply balances for cereals includes information on stocks in the beginning and end of period. In the calculations expected losses on 3 per cent of the harvest is expected. On potatoes 15 per cent losses is expected.

Use of concentrates The use of oilcakes, milk-products, residual from industry etc is based on information on production at Danish companies and trade statistics, and also information on other use than fodder is collected. No information of stocks are collected and there are no reduction of quantity because of possible waste before used for feed. For most important feed stuffs balances are published.

Use of roughage The use of beet roots, grass, silage, straw etc are based on the results from harvest surveys (available in <http://www.statbank.dk>) and it is expected that the harvest is used for feed in the crop year, i.e. harvest autumn 2004 is used in the crop year 2004/05. No information on stocks are available and therefore, in brief, the use of roughage is harvest minus waste.

Losses regarding roughage Losses is expected on grass and silage, mainly related to losses during storage. On silage maize and cereals, losses on 10 per cent is expected, while 6 per cent is expected on grass in rotation and 4 per cent on grass from permanent grassland. On beetroot 10 per cent losses is expected, while on silage tops 25 per cent are expected. Tops used as fresh matter is not

subject for deduction. However, no harvest of tops are recorded from 2005, because very low quantity.

Straw for fodder The use for feed is the results form information related to the harvest survey on cereals, protein crops and rape seeds, where information and the expected use of straw is collected. No losses is expected.

Conversion factors The feed value and protein content is calculated based on information from Farmers Advisory Service and reflected in conversions factors between volume, feed units and protein content. However, the Advisory Service's list of items is extended compared to Statistic Denmarks variables and some assumptions had to been made to link the in formations.

The use of cereals The use of cereals is shown for the single type and for cereals in total. The use is calculated as well on crop years as on calendar years and a distinction between Danish cereals and cereals from abroad is included. The elements in the balance sheet is the following:

The supply The available quantity in a crop year consist of the harvest minus expected losses (3 per cent), the import and the stock in the beginning of the period. The harvest is based on survey conducted by Statistics Denmark and data are published and can be found in the statbank.

The stocks includes all stocks of un-processed cereals and are monitored broken down on stocks at farms and stocks at traders and processors. The survey on stocks by end of June among farmers is based on a sample on 400 farms. The stocks at traders are monitored as well by end of June and by end of December every year and the information is gathered through a full survey among the traders . Stocks related to the Intervention Scheme is based on data from the administrative authority.

The use for seed, food and beverages The quantity of cereals used for seed is based on harvested areas and an expected use of seed per hectare of 180 kg.. The use for human consumption is based on collected information from the industry.

The industrial use of cereals for alcohol is based on estimation from the industry. Since 2000/01 the estimate has been 321 mio. kg.

The use for feed The volume available for feed is the residual after deducting the above mentioned type of use and the final stocks from the supply. The result is used in the statistics on the supply/use of feed at crop year. The use of cereals for feed at the calendar years is the average of two crop years.

The turnover of cereals Combined with collection of cereal stock information at traders information of turnover during the period (6 months) is collected. The data per type of cereals is broken down to the physical flow of cereals and the volumes purchased by the traders, because cereals are often stored at the traders while still belonging to the farmers, eventually by the purpose of later sale.

2.5 Statistical unit

The survey unit is the farm. A farm is always identical with a local unit the Business Register has marked as active in agriculture, irrespective of the NACE code.

2.6 Statistical population

The collected population covers traders and farmers. The traders covering at least 85 per cent. of all traders of grain and fodder in Denmark. Farmers cover with 95% probability Denmark accurate

2.7 Reference area

Denmark.

2.8 Time coverage

The statistics (FODER1) cover the period from 1990 and beyond. The statistics (FODER2) cover the period from 1992 and beyond. The statistics (FODER5 and FODER 6) cover the period from 2000 and beyond.

2.9 Base period

Not relevant for this statistic.

2.10 Unit of measure

- Weight (million kg)
- Feed value (millions feedunits)
- Crude protein (million kg)

2.11 Reference period

July 1st. to June 30th.

2.12 Frequency of dissemination

The statistics are published annually and about 6 months after the end of the year. Statistical Bank tables regarding the biannual counts of grain merchants are updated after census completion, typically 2 months after the census date.

2.13 Legal acts and other agreements

The Act on Statistics Denmark. EU-Parliament and Council Regulation 138/2004 on Agricultural Accounts for Agriculture and Council Directive 130/1989 on information used for compiling National Accounts.

2.14 Cost and burden

Survey on stock at farms: App 0.05 annual work units

Surveys on stocks and turnover at cereal traders: App- 0.1 annual work units

2.15 Comment

Further information is available at <https://www.dst.dk/en/Statistik/emner/erhvervslivets-sektorer/landbrug-gartneri-og-skovbrug/afgroeder>.

3 Statistical processing

Margins of statistical errors linked to harvest statistics, production statistics, trade statistics and estimation of losses. There can be lack of information on for example industrial use. The use for fodder is calculated as a residual value and errors and eventually lack of data will be reflected in the result. The stocks of cereals at farmer are based on a small sample which implies statistical errors. The stocks and turnover of cereals at traders are based on full survey and results are expected to be accurate.

3.1 Source data

There are several sources: Surveys on stocks and turnover at cereal traders and farmers are made specific for this statistic. Furthermore, data from other surveys in Statistics Denmark, in particular harvest statistics, production statistics, external trade statistics are used. Also specific information from few firms are included

3.2 Frequency of data collection

The survey on stocks by end of June among farmers is based on a sample on 400 farms.

The stocks at traders are monitored as well by end of June and by end of December every year and the information is gathered through a full survey among the traders . Stocks related to the Intervention Scheme is based on data from the administrative authority.

3.3 Data collection

Webquestionnaire.

3.4 Data validation

Stocks of grain from farmers is compared with information about number of hectares of grain and the number of pigs on the farm, in order to justify a small or large amount of grain in stock.

3.5 Data compilation

The use of feed is calculated using supply balance sheets for the single kinds of feed stuffs. On the one hand, the total supply is calculated containing domestic production, stocks at beginning of period and imports, and on the other hand uses are calculated containing exports, stocks at end of period and feeds used for animal production. The use of feed for animal production is calculated as a residual in the balance.

- Yield or production
- ÷ loss at producer
- + import
- + initial stock
- = Available total
- ÷ seed
- ÷ export
- ÷ industrial use
- ÷ human consumption
- ÷ consumption for other purposes
- ÷ final stock
- = use for feed

Basically, the results are on crop years, because this supplies the most accurate results, but balance sheets are also compiled on Calendar years as input for compiling Economic Accounts for Agriculture.

3.6 Adjustment

Not relevant for this statistic.

4 Relevance

Used to assess the stock of grain and fodder in agriculture, since the value of inventories is of great importance to gross value added calculation of agriculture.

4.1 User Needs

The 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.

4.2 User Satisfaction

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

4.3 Data completeness rate

In compliance with all regulations.

5 Accuracy and reliability

Margins of statistical errors linked to harvest statistics, production statistics, trade statistics and estimation of losses. Furthermore there can be lack of information on for example industrial use. The use for fodder is calculated as a residual value and errors and eventually lack of data will be reflected in the result. The stocks of cereals at farmer are based on a small sample which implies statistical errors. The stocks and turnover of cereals at traders are based on full survey and results are expected to be accurate.

5.1 Overall accuracy

As the statistics are based on a wide range of data sources - each statistic has its own degree of inaccuracy - some degree of inaccuracy must be expected.

5.2 Sampling error

Work in progress.

5.3 Non-sampling error

Work in progress.

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 quality of the statistics is regarded to be very good. The coverage of the traders is good because it is a full study. The coverage of farmers is accurate with 95 per cent probability.

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

In principle only final data are published. The latest data can be subject for update.

6 Timeliness and punctuality

Punctual.

6.1 Timeliness and time lag - final results

The statistics are published 5-6 months after the reference date.

6.2 Punctuality

The date of publication may vary up to a month.

7 Comparability

The statistics have been compiled since 1900 but are in their present form comparable from 1990 onwards. The statistics are compiled according to common European guidelines and are therefore comparable with statistics from other countries published by Eurostat.

7.1 Comparability - geographical

The statistics are compiled according to common European guidelines and are therefore comparable with statistics from other countries published by Eurostat.

7.2 Comparability over time

For most feeding stuffs the statistics are comparable over time. However, for a few products breaks in data have occurred over time, e.g. for fish meal and fish silage. Combined with release of figures in 2006/07, revised figures on fish based fodder was corrected back to 2001. The correction resulted in lower use of this kind of fodder.

Update of the figures used for conversion to feed units or to protein can be due to as well better knowledge as to real development in contents. However, in general results are comparable over time.

Fat for fodder (from slaughterers) was introduced with the 2006/07 release of figures from 2001 and onwards

7.3 Coherence - cross domain

The statistics form basis for input to Agriculture's gross factor income. This is also part of the National Accounts.

7.4 Coherence - internal

All the collected answers are stored in one register with all survey characteristics included in the survey. There is only one extrapolation factor per farm. For this reason no inconsistency can occur.

8 Accessibility and clarity

The statistics are published in [Statbank Denmark](#) The supply of fodder is furthermore delivered to Eurostat.

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

No NYT is published.

8.5 Publications

[Statistical Yearbook](#).

8.6 On-line database

The statistics are published in the StatBank under the subjects [Agricultural economics Intermediate Goods](#) in the following tables:

- [FODER2](#): Fodder use in Agriculture by type of fodder, use and time
- [FODER1](#): Feed Stuffs in Agriculture by type of fodder, origin, unit and time
- [FODER5](#): Fodder balance by type of fodder, time and use by type of fodder, period, use and time
- [FODER6](#): Value of feeding stuffs by feed, unit and time

8.7 Micro-data access

Researchers and other analysts from Authorized Research Institutions can access the micro-data of statistics through Statistics Denmark [Research Ordinance] (<https://www.dst.dk/en/TilSalg/Forskningservice/Dataadgang/Projekt Oprettelse>).

8.8 Other

Not relevant for this statistic.

8.9 Confidentiality - policy

[Datafortrolighedspolitik](#) i Danmarks Statistik.

8.10 Confidentiality - data treatment

The statistics are published at an aggregation level that does not require discretion.

8.11 Documentation on methodology

In preparation

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 Food Industries, Business Statistics. The person responsible is Sisse Schlægelberger, tel. +45 39 17 33 24, e-mail: sis@dst.dk

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