

**Documentation of statistics for  
Price and Volume Indicators 2016 Quarter 4**

## 1 Introduction

The purpose of these statistics is to show actual changes (monthly, quarterly or yearly) in prices and volumes in agriculture to indicate developments in overall economics in agriculture. The volume of animal products is used for supply balances and prognosis. Further information can be found in the declaration of content *Animal products. Balances*. The indices for sale products, of vegetable and animal origin, show as well the price developments for all categories as the volume developments for animal products. The indices for intermediate consumption show changes in prices on all production costs, including gross fixed capital formation. The indices are a part of Eurostats statistics on agricultural prices and all countries follow a common manual. Furthermore, the information on prices and volumes is used in the compilation of the Economic Accounts for Agriculture, compiled on annual basis, supplemented by annual indices on prices and volumes. These indices are not exactly the same as above mentioned because of different coverage and definition. Further information can be found in the declaration of content: *Economic Account for agriculture*. Up to the mid-seventies indices for agricultural products for sale were calculated with the crop year 1963/64 as basis year. Indices were calculated for the agricultural and horticultural sectors, respectively. These indices are calculated back to 1956 and the latest available series are published in *Agricultural Statistics 1976*. Indices with the present coverage, including agricultural and horticultural products and products from game and beekeeping, have been calculated since 1970. For the years before 1970 and for an overlapping period from 1970 to 1976, indices with a more limited coverage and excluding horticulture have been calculated. Since 1976 the most widely definition has been used, which includes horticulture, furproduction and products from bees and wild game. Base year in the prices indices is changed every fifth year, and latest base year is 2010.

## 2 Statistical presentation

The Statistics contains for almost all items, monthly, quarterly and yearly information of agricultural prices, as well on sale products as on most products used in the intermediate consumption including capital formation. Some prices are only obtainable as price indices only, especially regarding intermediate consumption. Furthermore the volumes are shown for animal products. In relation to the statistics the databank ([www.statbank.dk](http://www.statbank.dk)) is maintained with these and related data, often on monthly basis. The statistics covers both agriculture and horticulture. The point of observation is the farm gate, meaning when sale products leave the farm and when input products arrived at the farmgate. The statistics consists of a lot of absolute prices and volumes/quantities and of indices for development for certain products. The indices are aggregated by weighing into total indices for output and input in agriculture. The starting point for indices is a basic year, renewed every fifth year. The statistics on prices are concerning products almost covering the same as in Economic Accounts for Agriculture. However, secondary activities, agricultural services and indirect interests on bank loans (FISIM) are excluded. However, the gross capital formation is included in the price statistics, covering machinery, equipment, farm building and land improvement. The collection and dissemination of prices and volumes is organized taken into consideration importance of the certain products and the accessibility of data. In the current statistics the focus is on quarterly and/or monthly dissemination of prices, price indices and volumes regarding animal production. In particular on animal production, one can find monthly information available. There is not collected information on volumes of vegetable products and on intermediate consumption on quarterly or monthly basis, caused by seasonality and problems to get reliable data, in particular on services. Annual indices on prices and volumes on agricultural products and intermediate production is published in Denmark in relation to the yearly publication (*Agricultural Prices*) and more on volumes as well with Economic Accounts for Agriculture. The weighing procedure includes in this context the intra-used production. Indices on totals are, therefore, not fully comparable with compilation based on the quarterly price statistics. The situation is the same on intermediate consumption, also because of inclusion of more inputs.

## **2.1 Data description**

Purpose of the statistic is particularly to illustrate current shifts in primary agricultural prices as an indicator for the development of rural economy. Until the late '80s was a direct relative term statistics released on a monthly basis since quarterly. From 2013, supplemented by annual publication due to merger with other price statistic.

## **2.2 Classification system**

The cluster followed is the main branch 01, Agriculture, hunting, forestry and fishing. For more details see [DB07](#).

## **2.3 Sector coverage**

Agriculture and Horticulture.

## **2.4 Statistical concepts and definitions**

Prices are collected in DKK On a monthly, quarterly or annual basis, depending on what can be done. The indices are derived from 2010's GDP at factor as weight base, with yearly prices from 2010 = 100. The weights may vary over the year, based on the use or sale of the product / service

## **2.5 Statistical unit**

Gathered data from legal entities.

## **2.6 Statistical population**

Danish farms and horticulture sales

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

Current statistic covers 2005-

## **2.9 Base period**

The statistics consists of a number of actual prices and volumes, partly by the index of development. Index for the individual products are weighted together into an overall index for sales products and an overall index for intermediate consumption and fixed capital goods in agriculture. Index is calculated starting from a base year, which is renewed every 5 years. The base year is changed every 5 years later is the year 2010 used as the base year.

## **2.10 Unit of measure**

Monthly prices are expressed in absolute values, ie crowns (DKK). For quarters, there are indices with 2010=100. Finally, for the yearly prices there are both indices with 2010 = 100 and values in absolute values, ie crowns (DKK). Prices are without VAT.

## **2.11 Reference period**

01-10-2015 - 31-12-2015

## **2.12 Frequency of dissemination**

Monthly, quarterly and annually. Data tables for selected agricultural prices and potted plants is published monthly.

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

The right to collect data can be found in the Law on Statistics Denmark § 1, cf. Consolidated Act no. 1189 of 21 December 1992 with the changes imposed by § 1 of the Law no. 295 of 2 May 2000.

More legal acts are indirect related to the surveys, in particular the act on Economic Account for Agriculture (2004/138) and legal acts on animal production. A common manual about the quarterly prices indices and also absolute prices, "Agricultural Prices and Indices", is developed in Eurostat.

## **2.14 Cost and burden**

There are not compiled a response burden because of the very different character of the information received. However, roughly the burden is expectedly 0.1-0.2 annual working units.

## **2.15 Comment**

[Price and indices for agriculture.](#)

## **3 Statistical processing**

Not relevant for this statistic.

### **3.1 Source data**

Information on sale products plus seeds, fertilizers, feed, pesticides etc, is based on data deliveries from buyers and suppliers to farmers and from public authorities. Information on prices on energy, maintenance, services and capital formation is based on the data used in Statistic Denmark's general statistics on prices.

### **3.2 Frequency of data collection**

Data collected primarily on a monthly basis. However, there are also quarterly and annually collections. Wages and land prices are examples of yearly prices.

### **3.3 Data collection**

The majority of the data received comes from web questionnaires from [www.virk.dk](http://www.virk.dk)'s upload solution. Furthermore individual expert estimates and data registers are used.

### **3.4 Data validation**

Input data are compared with historical data and current knowledge collected in this area from various professional journals.

### **3.5 Data compilation**

There are absolute and indexed figures published for prices and volume growth in agriculture. The absolute figures are not treated, as the average of the collected figures is published without further processing. The index figures are weighted based on the gross factor income level of the individual goods in the base year 2010. Furthermore, there is a weighting of months, based on an individual assessment of the level of sales each month throughout the year 2010, which underlies the weighting of individual commodities. The weighting monthly is aggregated to quarterly weight. If a product group's sales were to change dramatically, the weighting could provide some distortion in comparison to how the individual goods real importance, and may give a distorted picture of the real world. This is inevitable, why there is a rebasing taking place each 5th year where all weights are reviewed and product groups' composition.

### **3.6 Adjustment**

No adjustments are, however, weighted prices and volumes of the season meaning. For example so watchman grains higher in September just after harvest than in March.

## **4 Relevance**

The statistics cover the need primarily to calculate value added needed for the agricultural gross factor income calculation. Furthermore, there is a need in the industry to follow price developments.

### **4.1 User Needs**

The main users are the EU and the agricultural organizations. Furthermore, the indices are used in relation to the Economic Accounts for Agriculture.

### **4.2 User Satisfaction**

High user satisfaction from people in the business

### **4.3 Data completeness rate**

The statistic complies in fully with all regulations and guidelines.

## **5 Accuracy and reliability**

On some products, i.e. horticultural products, qualities and types are several and dynamic. It makes it a little difficult to be sure on the representatively on the prices followed. Concerning input prices based on general price statistics, the situation in agriculture are maybe not fully reflected. Some indices on volumes are indirectly measured based on values and price indices. This method can lead to inaccuracy. The declaration on content on Economic Account for Agriculture and these on animal production includes more information on possible inaccuracy. Because of the very different picture of sources, margins of statistical errors can not be calculated. However, for main output products, i.e. milk and meat, the coverage and accuracy are close to 100 per cent. Prices on cereals and feeding stuff (concentrates) are based on more than 70 per cent of total volume, which ensure high reliability. In general, the accuracy is highest on sales product and less high on intermediate consumption and goods for capital formation.

### **5.1 Overall accuracy**

The overall accuracy is considered to be high, in particular on main products and inputs.

### **5.2 Sampling error**

Not relevant for this statistic.

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

Not relevant for this statistic.

### **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 overall accuracy is described as good, especially for products with great importance. For some products, such as horticultural products, there is a very wide range of grades and product types, which can make it difficult to ensure price indices agree continuous representation. For the production factors which price is based on the general price statistics, there may be special circumstances relating to agriculture, which is not reflected. Some volume for the use of indices to gross agricultural factor income is calculated indirectly using the value development and price index, which does not give a completely accurate result.

## 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

Most of the figures are final, when statistics are published.

## 6 Timeliness and punctuality

The statistic is regarded as punctual.

### 6.1 Timeliness and time lag - final results

The statistics are published on a quarterly basis around 6 weeks after the reference date, with two news releases every quarter, one on prices and one on volumes. The yearly publication is published around 3 months after the end of the year. All data are available and free here [www.statbank.dk](http://www.statbank.dk). Furthermore some of the most important prices are to found on a monthly basis here in the StatBank.

### 6.2 Punctuality

The statistics are published as scheduled, although delays can occur around the time of rebasing.

## 7 Comparability

Not applicable.

### 7.1 Comparability - geographical

Not applicable.

## 7.2 Comparability over time

The indices are not fully comparable over time as the base year is changed every five years. The latest rebasing (2010=100) took place in 2013. Indices for 2005 and onwards with 2005 as base year are available.

## 7.3 Coherence - cross domain

For many of agricultural products comparable price statistics are compiled by the Account Statistics for Agriculture.

## 7.4 Coherence - internal

Not relevant for this statistic.

## 8 Accessibility and clarity

The statistics are published in "Landbrug, gartneri og skovbrug" (Agriculture) appearing in the series "NYT fra Danmarks Statistik" (Statistical News) and in the annual publications Statistical Yearbook, Statistical Ten-Year Review and "Jordbrugets prisforhold". Results are available in tables in [www.statbank.dk](http://www.statbank.dk), on monthly, quarterly and yearly basis: LPRIS10, LPRIS15, LPRIS20, LPRIS25, LPRIS30 and LPRIS35.

### 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

[Prices in Agriculture](#) and [Animal production](#).

### 8.5 Publications

[Publication](#).

### 8.6 On-line database

[Prices](#) and [Volumes](#).



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

Please contact the person responsible.

### **8.8 Other**

Some prices are not available due to confidentiality reasons, but is included in the overall index. Indices are delivered to Eurostat on quarterly and annually basis. Eurostat furthermore receives yearly prices in absolute values.

### **8.9 Confidentiality - policy**

[Statistic Denmark's data confidentiality policy.](#)

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

Not relevant for this statistic.

### **8.11 Documentation on methodology**

A description of definitions and methodology is available in the Eurostat publication *Methodology of EC Agricultural Price Indices (Output and Input), Luxembourg 1985* and in Eurostat: *EU-handbook on Agricultural Price Statistics, 2002* Furthermore, a methodological description appears in the publication *Indeksberegninger i Danmarks Statistik, København 2005* (Index calculations at Statistics Denmark). For 2010=100 it has been decided in Eurostat to rebase using the manual for 2005=100 as guidance.

### **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 this statistics is in the division of Food Industries. The persons responsible are:

- Mads Kjeld Meyer-Dissing, tel. +45 3917 3381, e-mail: mdi@dst.dk (plant production)
- Mona Larsen, tel. +45 3917 3399, e-mail: mla@dst.dk (animal production)

### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

Office for Food Industries; department for Business Statistics

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