

**Documentation of statistics for
Prices and price index for agriculture 2021**

1 Introduction

The purpose of these statistics is to illustrate the evolution of agricultural prices and price indices. The agricultural sales index illustrates price trends for both vegetable and animal sales products and services. A part of the statistics have been calculated since 1956, but since 1970 the most widely definition has been used, which includes horticulture, fur production and products from bees and wild game.

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. The statistics covers both agriculture and horticulture. The collection of data for these statistics has not been affected by COVID-19.

2.1 Data description

The statistics consist partly of a number of actual prices and partly of indices. The indices of the individual products are compared to sub-indices as well as a total index of sales products and a total index of consumption in production, as well as fixed investment goods in agriculture.

The statistics follow largely the same product groups as in the calculation of [agricultural gross factor income](#), except for, for example, secondary products, machine station services and indirect bank costs. Conversely - and quite significantly - the statistics contain the development in prices of agricultural investment goods, ie. in machinery, fixtures, buildings and basic improvements.

The measurement point for information is on the delivery of sales products from a farm (farm) and on the arrival of consumables to the farm (farm). These are prices for goods picked up or delivered at the farm.

The purpose of the statistics is to illustrate current shifts in primary agricultural prices, as an indication of the development of the agricultural economy. Until the late 1980s, the directly related business cycle statistics were published on a monthly basis and since quarterly. From 2013 supplemented with annual publication as a result of merging with other price statistics.

2.2 Classification system

The cluster followed is the main branch 01, Agriculture, hunting, forestry and fishing. For more details see [Dansk Branchekode DBo7](#).

2.3 Sector coverage

Agriculture and Horticulture.

2.4 Statistical concepts and definitions

Off farm:

On site (farm):

Investment goods in agriculture:

2.5 Statistical unit

The units in the statistics are the products sold by the primary producers and the products and services purchased by the producers. Sales products are calculated in 100 kg (eg cereals, vegetables, meat) and par. or 100 pcs. (eg piglets and potted plants). Furthermore, on the cost side 100 kWh (el) and 1000 l (oil).

2.6 Statistical population

The population consists of the goods and services that the primary producers sell and buy.

2.7 Reference area

Denmark.

2.8 Time coverage

The statistics cover the period from 2005 and above the monthly prices for selected agricultural products, 2010 for monthly prices for houseplants, while the index is from 2010 and above quarterly and annual index. Older data is available and can be found in closed tables in the statistics stat bank. In addition, there are data in the publication [Landbrugsstatistik](#).

2.9 Base period

Basic year is changed every 5 years. 2015 is the last year used as the base year.

2.10 Unit of measure

Monthly prices are expressed in absolute values, i.e. crowns (DKK). For quarters, there are indices. Prices are without VAT. Potted plants have monthly index, year to date prices and price development.

2.11 Reference period

Calendar month, quarter and calendar year.

2.12 Frequency of dissemination

Monthly, quarterly and annually.

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.

The basis for collecting price information in the field of agriculture is the overall EU Council Regulation on national accounts statistics and regulations relating to production information and calculation of the economy of the agricultural sector, 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

Since there are very different types of alerts, some of them via agricultural organizations, and there is no overall reporting burden. The vast majority of sources for the collection are collected for other statistics.

2.15 Comment

Further information can be found at the [Price and indices for agriculture](#) for these statistics, or by contacting Statistics Denmark directly.

The collection of data for these statistics has not been affected by COVID-19.

3 Statistical processing

Data for this statistics is collected at different frequencies from multiple sources. The collected data undergoes a simple validation. Once data is validated, aggregation occurs for a portion of data before publication, while other data is while other data is published directly.

3.1 Source data

The prices of agricultural sales and purchases of goods are mainly collected on a monthly basis and are mainly based on reports from companies dealing with the producers of primary agriculture, eg. feed dealers. In addition, among other things, information from industry organizations, public authorities and listings for agriculture-specific matters.

As a price basis for various costs including energy, maintenance, services and investment goods are obtained from data from Statistics Denmark's general price statistics. Information on slaughter and export of live animals, milk weighed in on dairies, eggs weighed in on egg packaging come from administrative records.

More information can be found in the statistics documentation [Slaughter animals and meat production](#), [Milk and dairy products](#), [Egg production](#). More detailed information can be found in the glossary on the final pages of [Agriculture's Price Relationship](#).

3.2 Frequency of data collection

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

3.3 Data collection

The data received comes from web questionnaires upload solution and data registers and quotations.

3.4 Data validation

The incoming data is kept against historical data and current knowledge collected in the field of professional journals so that unrealistic changes in prices are detected.

3.5 Data compilation

There are absolute and indexed figures (both total index and sub-index) published for prices 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 2015. Furthermore, there is a weighting of months, based on an individual assessment of the level of sales each month throughout the year 2015, 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.

The starting point for weighting when calculating total and sub-indices for sales products and consumption in production are the individual product values in the calculation of [Economic Accounts for Agriculture](#) and correspondingly in the EU's [Economic Accounts for Agriculture](#). These inventories are based on quantity price and value information from a number of sources.

The emphasis is on farmers' sales and purchases during the base year (reference period) including trade between agricultural holdings. Estimated internal turnover on agricultural holdings is included in the calculation of the indices published by elucidation of agricultural gross factor income. For investment indices, values for agricultural investment are used in the base year. However, subdivision of inventory has been estimated using other sources.

When calculating monthly indices of sales and consumption in production, it is taken into account that the purchase and sale of some products, eg cereals, fruits and vegetables, is seasonal. Where there is no or only insignificant difference in turnover months in between, the weight for the month for the product is 1/12 of the annual weight. For products with great variation throughout the year, the annual weight is distributed based on the base year's turnover of the 12 months, possibly, however, quarterly or semi-annually, depending on available information and materiality.

For indexes where prices for several individual products index an item (for example, prices for several types of cattle are included in a total price for cattle), the weighting is done by dividing the weight basis of the product into value for individual products. In some cases, information is found for the full product range, in other cases less significant products are represented through others.

Annual indexes are formed on the basis of the data that is considered to be the most accurate. Where data and volume information for the year are available from data suppliers, such data are used. In other cases, the monthly indices weighted with the monthly weights are used to calculate the annual index. When calculating partial and total indices on an annual basis, and then weighted into aggregate indices on an annual basis.

3.6 Adjustment

No corrections are made, however, weighted prices according to season's importance. Vegetable prices are, after the rebate, all per kg. Previously, the price of cucumbers, lettuce, cauliflower, cabbage and leeks was calculated per piece.

4 Relevance

The statistics are used by agricultural organizations and ministries to monitor price developments within the industry as well as as a basis for various analyzes and forecasts. The basic data and results of the statistics are also applied to other statistical areas in Denmark Statistics, for example, for the calculation of the gross income of agriculture as used in the National Accounts.

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

There is a user committee for agricultural statistics and a working group for account statistics for agriculture, where the users have the possibility to comment on [tJordbrugets Prisforhold](#). The users are satisfied with the statistics.

4.3 Data completeness rate

The statistics are subject to EU requirements ([regulations and guidelines](#)) regarding industry coverage, degree of detail, frequency and release times. Statistics Denmark meets all these requirements. Some indices are not included in the population because the goods are of a special nature or because the turnover is too low. Other indices are included in the sample, but are not published due to discretionary considerations.

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

Where possible, complete information is obtained for a product, such as seed companies' purchase of agricultural seed harvest or dairy purchase of milk from farmers. In a number of other cases, a representative range of agents and individual products is used.

For example, sales prices for cereals are based on information broken down into cereals from the largest cereal and feed companies, which cover more than 70 per cent. of the turnover, while, for example, vegetable price indices are based on reports from the largest wholesalers about their payment to the growers for the most important vegetables.

The methods chosen were chosen on the basis of statistical certainty, materiality, and the possibility of data collection as well as the desire for a low respondent burden by reporting to Statistics Denmark.

5.3 Non-sampling error

The indices are not fully comparable over a long period of time (development consistent), except for indices for homogeneous individual products. Comparability is affected by the fact that the weight basis for the comparison of indexes of sales products and consumption in production changes in connection with the re-assessment every five years.

The uncertainty of the index over many years will increase with the number of years elucidated, as there are continuous changes in weight basis (in the case of rebates) and in the qualitative properties of products. The quality factor is not least important for investment indices, as technological development means new products that differ significantly from previous ones. But even some items, e.g. plant protection products, can have major quality changes.

The starting point of the weight basis can change significantly, which can cause distortions. In the base year there may be goods that change a lot afterwards. For example, mink skins had a high price in 2015, and at the same time there was a large production, ie. the weight became high. Since then the price has fallen extremely and it has also affected production.

Production within the simple range can also change extremely. For example, pig production, where the number of pigs slaughtered in relation to exported piglets has changed greatly.

It may happen that a product changes characteristics during the period between rebates, but otherwise must be considered to be the same product. If it is possible to find a basis for calculating the quality-related shift in price, this is corrected.

The index calculation assumes reported information for all individual products for all months of sales and purchases. This condition will not always be met. In some cases, information is delayed, in others it fails to get the information.

The specific handling of data deficiencies is done by one of the following solutions, with a priority in the order: • Months where experience is often not data are not included in the calculations. • A company that has not provided data is excluded from the calculation during that period. • An average of the previous and following month is used. • A price or quantity based on a professional estimate is used based on historical knowledge.

Applied replacement information will be updated with the relevant data if it arrives at a later date.

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

In connection with the rebate every five years, the list of individual products is reviewed to ensure that there is a broad coverage of a product price. Here, the range will typically be replaced, so that only individual products of relatively high importance appear. This usually means that only a few individual products will be discontinued before the next rebase.

In connection with the 2015 rebuilding, a price database was created in which various checks and safeguards of data were incorporated. In connection with the rebate, some of the pesticide products were replaced.

6 Timeliness and punctuality

The statistics are usually published without any delay in relation to the published release times.

6.1 Timeliness and time lag - final results

The first data is preliminary and thus corrections can be made by updating. The statistics are final after 2 years.

6.2 Punctuality

These statistics are published without delay, with reference to the announced time.

7 Comparability

Statistics are compiled according to common European guidelines and can therefore be compared with similar statistics from other European countries.

7.1 Comparability - geographical

Data is delivered quarterly and yearly to the EU Statistical Office, Eurostat. Data for all EU countries can be available at [Eurostat](#). All EU countries are subject to the same rules so that the statistics are produced according to common guidelines and principles.

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 (2015=100) took place in 2018. In connection with the rebate for 2010 = 100, Christmas trees and ornamental vegetables are now considered an agricultural product due to NACE Rev.2. In addition, price statistics have been compiled in relation to prices. Accounting statistics for agricultural tasks (Office transferred from IFRO to the Food Industry Office in 2009) and the Food Industry Office, so that only future agricultural price statistics will be obtained from Statistics Denmark.

7.3 Coherence - cross domain

For selected agricultural products, they are also highlighted by the Knowledge Center for Agriculture, Agriculture and Food.

7.4 Coherence - internal

Not relevant for these statistics.

8 Accessibility and clarity

These statistics are published quarterly in a Danish press release. In the StatBank, these statistics can be found under the subject [Prices and price index for agriculture](#). These statistics are also presented in the [Statistical Yearbook](#). For further information, go to the [subject page](#).

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 two times per year 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 Prices and price index for agriculture in the following tables:

- [LPRIS10](#): Prices on selected agricultural output by product, unit and time
- [LPRIS27](#): Price indices for agricultural sale and purchase by product, unit and time
- [LPRIS26](#): Price indices for agricultural sale and purchase by product, unit and time
- [LPRIS31](#): Prices at agricultural output by product, unit and time
- [LPRIS36](#): Prices at agricultural input by product, unit and time
- [LPRIS16](#): Sales prices at pot plants by pot plants, unit and time
- [LPRIS21](#): Price indices for agricultural sale and purchase by product, unit and time
- [LPRIS37](#): Prices for agricultural land and tenancy by region, product and unit

8.7 Micro-data access

There will be limited scope to obtain more detailed information than the ones published. Confidentiality concerns for individual companies limit the specific possibilities.

8.8 Other

An index is provided to Eurostat on a quarterly and annual basis. In addition, Eurostat receives annual prices in absolute values. Data for all EU countries can be found on [Eurostat website](#).

8.9 Confidentiality - policy

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

8.10 Confidentiality - data treatment

Certain prices are not available due to confidentiality, but are included in the overall indices. These statistics are not published at a level of detail that requires discretion.

8.11 Documentation on methodology

A description of definitions and methodology is available in the Eurostat publication EU-handbook on Agricultural Price Statistics, [Handbook for EU Agricultural Price Statistics, version 2.0](#).

Furthermore, a methodological description appears in the publication Index calculations at Statistics Denmark. [Indeksberegninger i Danmarks Statistik](#).

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 is in the division of Food Industries. The person responsible is Mona Larsen, tel.: + 45 3917 3399, e-mail: mla@dst.dk.

9.1 Contact organisation

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