

Number of Livestock

Quality Report

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1 Contact

1.1 Contact organisation

Natural Resources Institute Finland

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Statistical services

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2 Metadata update

2.1 Metadata last certified

14.8.2023

2.2 Metadata last posted

14.8.2023

2.3 Metadata last update

14.8.2023

3 Statistical presentation

3.1 Data description

The statistics on the number of livestock contain the numbers of cattle, swine, sheep, goats and poultry by region and municipality. Statistics on the number of farm horses were recorded until 2018. The cattle statistics give a breakdown of the number of cows, suckler cows, bulls, heifers and calves. The swine statistics contain the numbers of sows, boars, fattening pigs and piglets. The poultry statistics give a breakdown of the numbers of hens, chicks, roosters, broilers, broilerhens, turkeys, turkey hens and other species. The sheep statistics give a breakdown of the number of ewes and other sheep.

3.2 Classification system

The number of cattle 1.5. and 1.12.

- Dairy cows
- Suckler cows
- Bulls, 2 years and above; bulls, 1 – < 2 years
- Heifers, 2 years and above, as dairy cows, suckler cows, and slaughter, according to the purpose of use
- Heifers, 1 – < 2 years, as dairy cows, suckler cows, and slaughter, according to the purpose of use
- Bull and cow calves, under 1 year

The number of pigs 1.4. and 1.12.

- Boars, 8 months and above
- Sows, 8 months and above
- Young breeding pigs, above 3 months – under 8 months
- Fattening pigs, above 3 months – under 8 months
- Piglets, 3 months and below

The number of pigs 1.4. (Classifications until the year 2014)

- Boars, live weight of 50kg and above
- Sows, live weight of 50kg and above
- Fattening pigs, live weight of 50kg and above
- Pigs, live weight of 20kg – under 50kg

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- Piglets, live weight of under 20kg

The number of pigs 1.12. (Classifications until the year 2020)

- Breeding pigs, live weight of 50kg and above, and young pigs intended as breeding pigs
- Sows, live weight of 50kg and above:
 - mated sows, farrowed at least once
 - unmated sows, farrowed at least once
 - unfarrowed sows
 - unfarrowed, unmated sows
- Fattening pigs:
 - fattening pigs, live weight of 50kg – under 80kg
 - fattening pigs, live weight of 80kg – under 110kg
 - fattening pigs, live weight of 110kg and above
- Other pigs:
 - pigs, live weight of 20kg – under 50kg
 - piglets, live weight of under 20kg

The number of sheep 1.5.

- Ewes, lambed ewes, and other sheep

The number of goats 1.5.

- Total number of goats

The number of poultry 1.4. and the number of places
Classifications since 2023:

- Laying hens, over 16 weeks
 - Laying hens over 16 weeks, enriched cage
 - Laying hens over 16 weeks, barn hen house
 - Laying hens over 16 weeks, free-range hen house
 - Laying hens over 16 weeks, organic
- Breeding hens
- Chicks, production generation and parentsgenerations, under 16 weeks
- Broilers

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- Broilerhens
- Turkeys
- Turkey-hens
- Cocks
- Other poultry

The number of poultry 1.4. (Classifications until the year 2020)

- Chickens
- Chicks
- Broilers
- Broilerhens
- Turkeys
- Other poultry

The classification of farms into regions is based on the municipality in which a farm's administrative centre is located. The numbers of livestock are published by region (by ELY Centre until 2022) and municipality. The number of livestock at 1st of April or 1st of May and the number of cattle at 1st of December are also available by other regional classifications and by herd size.

3.3 Sector coverage

Statistics on the number of domestic animals mainly include production animals at farms registered in the register of agricultural and horticultural enterprises. Since 2013, registered farms include agricultural and horticultural enterprises, the financial size of which is at least EUR 2,000. The financial size is determined by using the Standard Output method.

3.4 Statistical concepts and definitions

The statistics represent the number of livestock on the date of collecting data. The dates of collecting data are the 1st of April, 1st of May, and 1st of December, depending on the animal species.

Data on the number of livestock based on animal registers includes all animals in those registers. Miniature pigs and wild boars are not included in the statistics. The statistics do not

include sheep and goats marked in the register as hobby, pet, or laboratory animals.

The poultry numbers mainly exclude birds from holdings kept for hobby purposes.

Number of sheep 1.5.: The number of ewes includes lambed ewes, and unlambd female sheep that have not lambed. The category "other sheep" includes ewe lambs, rams and male lambs.

Number of poultry until the year 2020

Number of poultry 1.4.: The category "other poultry" by ELY Centre includes, among others, roosters, swans, domestic ducks, ostriches, farmed pheasants, and ducks.

Number of poultry 1.4.: The category "other poultry" in the statistics by municipality includes broilerhens, roosters, swans, domestic ducks, ostriches, farmed pheasants, and ducks.

Number of hens and broilers on average: The data is based on farms' notices on the number of chickens and broilers at the beginning of a month (form 461 of administration of agricultural subsidies: Welfare payment for pigs and poultry, agri-environmental subsidies, and subsidies for organic production). The average number per farm is calculated by taking the sum of the number of animals on farm at the beginning of each month and dividing the sum by the number of months the farm has had poultry.

Number of poultry since the year 2021

Hens total: Contains laying hens over 16 weeks, production generation whose egg productions is used for consumption, and breeding hens, whose egg production is used for production of chicks.

3.5 Statistical unit

The number of livestock is based on administrative animal registers, and the number of poultry is based on data annually collected from farms.

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3.6 Statistical population

Statistics on the number of domestic animals mainly include production animals at farms registered in the register of agricultural and horticultural enterprises. Since 2013, registered farms include agricultural and horticultural enterprises, the financial size of which is at least EUR 2,000. The financial size is determined by using the Standard Output method.

3.7 Reference area

The numbers of livestock are published by region and municipality.

3.8 Time coverage

Information on the number of livestock is available on the website since the 1950s.

3.9 Base period

The statistics are not an index.

4 Unit of measure

The number of livestock is presented as numbers.

5 Reference period

Calendar year

6 Institutional mandate

The duties of the Natural Resources Institute Finland have been defined in the Act on the Natural Resources Institute Finland (561/2014) and the Act on the Food and Natural Resources Statistics (562/2014). The Act on the Food and Natural Resources Statistics defines the duties of the Natural Resources Institute Finland to be compiling and publishing statistics regarding:

1) the structure, production methods, and input in production of agriculture; the production of crops, horticulture, and livestock; the environmental effects of production, and the prices of agricultural products,

- 2) commercial utilisation of forests, activity of the wood market, conservation and maintenance of forests,
- 3) fishing, aquaculture, fisheries, the market of fisheries, and
- 4) the safety of food products.

The act gives the Natural Resources Institute Finland extensive permissions to collect information on agriculture, horticulture, aquaculture, processing and trade of agricultural and aquacultural products, forestry, and the processing and trade of wood.

The Statistics Act (The Statistics Act 280/2004, 361/2013) legislates on, including but not limited to, data collection, data processing, and duty of disclosure. In addition to the Statistics Act, the Personal Data Act and the Act on the Openness of Government Activities are applied when processing data for compiling statistics.

The main document guiding our actions is the perennial European statistical programme, approved by the European Parliament and the Council of Europe, based on which the commission produces an annual work programme. The statistics included in the European Statistical Programme are prescribed in the Council Regulation 322/97.

The Statistical Office of the European Union, Eurostat, and the statistical offices of EU countries must apply the EU's Statistics Act when compiling statistics following the work programme. As a supranational regulation, it surpasses the national Statistics Act but in practice there are no contradictions between the Statistics Acts of the EU and Finland.

6.1. The Legal acts and other agreements

The statistics are compiled based on the Act on the Natural Resources Institute Finland (561/2014), the Act on Food and Natural Resource Statistics (562/2014), and the Statistics Act (280/2004). The regulation No 1165/2008 of the Council of Europe also includes obligations regarding the production of statistics on the number of livestock.

6.2. Data sharing

Data on the number of livestock is published yearly on the Natural Resources Institute Finland website. A webpage, announcements, news, and blogs regarding the statistics can be found on the website of the Natural Resources Institute Finland. Tables relating to the statistics are available on the statistics database of the Natural Resources Institute Finland.

7 Confidentiality

7.1 Confidentiality - policy

Confidentiality is a base principle of statistics and assures the confidential processing of data provided by informants, and the Natural Resources Institute Finland has undertaken to follow this principle. Micro-data is confidential and must never be released for administrative decision-making, investigation, surveillance, legal proceedings, or similar purposes.

7.2 Confidentiality - data treatment

The confidentiality of data collected for statistical purposes is guaranteed according to the Statistics Act (280/2004), the Personal Data Act (523/1999), the Act on the Openness of Government Activities (621/1999), and the EU General Data Protection Regulation (2016/679). Data is protected at all stages of processing using the necessary physical and technological solutions. The staff only has access to information necessary for their duties. Unauthorised people do not have access to spaces in which micro-data is processed. Staff members have signed a non-disclosure agreement when entering duty. Intentional breach of confidentiality will be penalised.

8 Release policy

The disseminations of the Natural Resources Institute Finland are published online on weekdays at 9:00. Data is public after it has been published on the website.

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8.1 Release calendar

The publication dates are confirmed in autumn together with the action plans. The release calendar of the following year is published for users in the end of the year. The release calendar holds data on the dates of future publications. The publication dates are published in the calendar at first with an accuracy of one week, and two months prior to the publication date with an accuracy of a day. The calendar also contains direct links to already published statistical publication.

8.2 Release calendar access

[Statistical releases calendar | Natural Resources Institute Finland](#)

9 Frequency of disseminations

Statistics on the number of livestock are recorded once or twice a year, depending on the animal species.

10 Dissemination format

10.1 News release

Statistics on the number of livestock are published yearly.

10.2 Publications

Information on the number of livestock is published in the e-yearbook of food and natural resources statistics.

The statistical office of the European Union, Eurostat, and the Food and Agriculture Organization of the United Nations, FAO, publish data from the statistics on their websites.

10.3 On-line database

[PxWeb - Number of livestock](#)

10.4 Other

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10.5 Documentation of methodology

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11 Quality management

11.1 Quality assurance

The Natural Resources Institute Finland follows the Code of Practice and the Quality Assurance Framework of European statistics when compiling statistics. The Code of Practice concern the independence and accountability of statistics authorities, and the quality of processes and published data. The principles are compatible with and supplement the Principles of Official Statistics, agreed upon by the United Nations Statistical Commission. The quality criteria of official statistics in Finland are also compatible with the Code of Practice of European statistics. The principles are also compatible with the European Foundation for Quality Management.

The annual quality assurance of statistics performed by Statistics Finland includes statistics produced by the Natural Resources Institute Finland.

The response material of the statistics is reviewed and edited on a monthly basis. Additionally, the non-response is investigated based on variable background information.

11.2 Quality assessment

The response material of the statistics is reviewed and edited on a monthly basis. Additionally, the non-response is investigated based on variable background information.

12 Relevance

12.1 User needs

Feedback is collected from the users of the statistics in a meeting regarding statistics reforms, and as written comments. Feedback is also received directly. We follow the received feedback and take it into consideration in developing the statistics.

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12.2 User satisfaction

Feedback is collected from the users of the statistics, especially when revising the statistics. Feedback is also received directly. In addition, we investigated the wishes of users for developing the statistics in the autumn of 2021 and beginning of 2022, when updating the work programme for the Natural Resources Institute Finland. We follow the received feedback and take it into consideration in developing the statistics.

12.3 Completeness

The data content of the statistics covers all requirements set in the EU regulations.

13 Accuracy and reliability

13.1 Overall accuracy and reliability

Non-response error slightly decreases the reliability of the statistics on the number of poultry.

Until the year 2020, non-response error decreased the reliability of the statistics on the number of pigs (1.12.). Until the year 2020 data was collected with the Farm Survey, which was a sample survey. Not all farms included in the sample were reached during data collection, and some refused to give data on the number of swine.

The reliability of data on cattle and sheep numbers is undermined by the fact that it may not be possible to extract data from administrative animal registers with complete reliability.

The final data on the number of cattle, pigs, sheep and goats are taken from the register on a given date. If data are updated in the register after this date, the changes made are not recorded in the statistics

13.2 Sampling error

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13.3 Non-sampling error

13.3.1 Coverage error

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13.3.2 Measurement error

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13.3.3 Non-response error

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13.3.4 Processing error

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13.3.5 Model-based error

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14 Timeliness and punctuality

14.1 Timeliness

Preliminary data on the number of cattle at 1st of May is published in mid-June. Preliminary data on the number of poultry at 1st of April is published in July. Preliminary data on the number of pigs at 1st of April, and the number of goats at 1st of May is published in mid-December. Final data is published the following spring, when the register of agricultural and horticultural enterprises is completed.

Data on the number of cattle and pigs at 1st of December is published in the summer of the following year.

14.2 Punctuality

The statistics have been published according to the publishing date declared in advance.

15 Coherence and comparability

15.1 Comparability - geographical

The annual data is comparable, meaning the data between ELY Centres is comparable.

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15.2 Comparability - over time

Statistics on the number of livestock is mostly comparable with previous years. The date of collecting data has varied slightly across the years.

Data by area is not fully comparable due to changes to area classifications. [Luokitustiedotteet | Tilastokeskus](#)

Statistics on the number of sheep, goats, and chickens was produced twice a year until the year 2009. Since the year 2010 statistics on the number of sheep, goat, and hens has been produced only once a year: Chickens 1.4. and sheep and goats 1.5. In the year 2010 the date of data collection was changed from the 1st of June to the 1st of May.

Since 2013, the population of the statistics includes the livestock of farms in the register of agricultural and horticultural enterprises, the financial size of which is at least EUR 2,000. The financial size is determined by using the Standard Output method. Before the year 2013 the population of the statistics covered the livestock of those farms that had at least a hectare of usable farmland or had at least one livestock unit of livestock.

The number of cattle has been collected from the bovine register since the year 1999. Before that, the number of cattle in the spring was based on data collected from the register of agricultural enterprises and on Farm Survey conducted on the 1st of December on farmers as a sample survey.

The statistics on the number of cattle have become more accurate since the year 2003. In the spring of 2003, the new bovine register was taken into use and at the same time the statistical definitions were defined more closely. The improved definitions particularly affect the numbers of cows and heifers over 2 years, compared to the previous year. The recognition of a heifer's first calving has been improved significantly.

The new cattle register was introduced in 2022, and it was not possible to extract cattle numbers from the new register in quite the same way as from the old register, which means that the data are not fully comparable with data from previous years.

The number of pigs 1.4. and 1.12 is based on the administrative pig register. The number of pigs 1.4 is based on a census study and 1.12 on a sample survey. Data collected using different methods might not be fully comparable.

From year 1995 to 2014 the number of pigs 1.4 was based on data received from IACS, and statistics on the numbers were produced in weight-based classes. Since the year 2015 the number of pigs has been based on the pig register, and statistics on the number of pigs are produced in age-based classes. Only the class "pigs total" can be considered comparable before and after 2015 due to these changes in classifications.

Until the year 2020 the number of pigs was based on a sample survey, and statistics on the number of pigs were produced in weight-based classes. Since the year 2021 the number of pigs has been based on the pig register, and statistics on the number of pigs is produced in age-based classifications.

Since the year 2005 the numbers of sheep and goats have been based mainly on the sheep and goat register. Before that, the number of sheep and goats were based on the farm register and the Farm Survey. Data before and after 2005 is not fully comparable due to changes in statistical methodology. Sheep-keepers in 2009 and goat-keepers in 2010, who had registered their animals as pet, hobby or laboratory animals, were excluded from the statistics. The decreases in the number of sheep farms in 2009 and the number of goat farms in 2010 were abnormally high due to these exclusions.

Since 2015 the number of sheep is not fully comparable with previous years. From 2009 to 2014 other administrative sources were used to supplement the register data in compiling statistics on the number of sheep. Since 2015 the data in the statistics is only based on data collected from the register.

Since 2015 the number of broilers is not comparable to data from previous years. Data for the number of poultry for farms with no data available in the application for subsidies has been supplemented from other administrative sources. Some farms' animals can be counted when supplementing data from other sources, which decreases the reliability of the statistics.

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Until the year 2020 the number of poultry was based on data collected from administrative registers. Since 2021 the data has been collected from farms with a statistical survey, and farms with 50 or less birds have been excluded from data collection. The decrease in the number of poultry farms in 2021 was abnormally high, as the statistics do not cover farms with only a few chickens.

15.3 Coherence - cross domain

The data is coherent with other statistics based on the register of agricultural and horticultural enterprises. The statistical population includes farms included in the register of agricultural and horticultural enterprises.

15.3.1 Coherence between sub annual and annual statistics

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15.3.2 Coherence with National Accounts

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15.4 Coherence - internal

Data on the number of livestock by area is not fully comparable due to consolidation of municipalities. Changes in areas have not been revised to older statistics.

16 Cost and burden

The burden stays low because most of the data in the statistics is collected from administrative animal registers.

17 Statistical processing

17.1 Source data

Data on the number of livestock is collected mostly from administrative animal registers. The number of cattle is based on the bovine register, the number of swine is based on the pig register, and the numbers of sheep and goats is based on the sheep and goat register. The number of poultry is collected from farms annually with a web survey.

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17.2 Frequency of data collection

The number of cattle and pigs is collected from the registers twice a year, and the number of sheep and goats is collected once a year. The number of poultry is collected from farms annually in April.

17.3 Data collection

The number of poultry (1.4 and the number of places) is based on information collected annually from farms.

The number of cattle (1.5. and 1.12.) is collected from the bovine register. Data in the register is based on farmers' notices on birth and removal of cattle. Farmers must enter data to the register within seven days.

The number of pigs is collected from the pig register, to which the animal keepers must enter data on the number of animals per location three times a year: in May (January to April), September (May to August) and January of the following year (September to December). The number given to the register is the number of animals on the 1st day of the month.

The numbers of sheep and goats 1.5. are collected from the sheep and goat register. Data in the sheep and goat register is based on farmers' notices on animals giving birth, and buying, transferring, and removing animals. Notice of selling, transferring, or removing animals must be entered in the register within seven days of the event. Farmers of sheep and goats must enter data on the birth of animals in the register within six months.

17.4 Data validation

If for example an abnormally large observation is spotted during the data compilation process, the authenticity of data is reviewed.

17.5 Data compilation

Faulty data is fixed mainly by hand. If a farm is missing data, and it is known that the farm has not stopped production, the missing data is imputed using the farm's numbers from the previous year.

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17.6 Seasonal adjustment

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18 Comment

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