Luke
NATURAL RESOURCES
INSTITUTE FINLAND

Energy consumption of agriculture and horticulture

Quality Report

luke.fi

Quality Report

Table of contents

1 Contact

1.1 Contact organisation

Natural Resources Institute Finland

1.2 Contact organisation unit

Statistical services

1.3 Contact name

Anna-Kaisa Jaakkonen

1.4 Contact person function

Senior Statistician

1.5 Contact mail address

Natural Resources Institute Finland

Statistical services

PL 2

00791 Helsinki

1.6 Contact email address

tietopalvelu@luke.fi

1.7 Contact phone number

+358 29 532 6000

1.8 Contact fax number

+358 29 532 6101

2 Metadata update

2.1 Metadata last certified

27.6.2022

2.2 Metadata last posted

27.6.2022

2.3 Metadata last update

27.6.2022

3 Statistical presentation

3.1 Data description

The statistics can be used to monitor the development of energy consumption in agriculture and horticulture, and the use of different energy sources.

3.2 Classification system

Data is available for the whole of Finland and by ELY Center. Data has also been categorised by farms' production sectors.

3.3 Sector coverage

The statistics include all active agricultural and horticultural enterprises with production. Active agricultural or horticultural enteprises are farms or enterprises with a financial size of over 2000 EUR. The financial size is calculated by using the Standard Output method.

3.4 Statistical concepts and definitions

The statistics contain information on the energy consumption of agriculture and horticulture by energy type. Energy consumption does not include the energy consumption of households, forestry, or other businesses. Data is available sorted by region and production sector.

Firewood, pieces of firewood, and other whole-trees are classified as wood. Wood chips include logging residue chips, chippings, and other wood chips.

3.5 Statistical unit

Enterprises in the register of agricultural and horticultural enterprises are included in data collection.

3.6 Statistical population

The statistical population contains all active agricultural and horticultural enterprises with production. Active agricultural or horticultural enterprises are farms or enterprises with a financial

size of over 2000 EUR. The financial size is calculated by using the Standard Output method. This definition was taken into use in statistics regarding data from 2013.

3.7 Reference area

Information is produced for the whole of Finland and by ELY-Centre.

3.8 Time coverage

Data on the energy consumption of agriculture and horticulture in Finland has been collected in 2010, 2013, 2016, and 2020.

3.9 Base period

The statistics are not an index.

4 Unit of measure

Data in the statistics is given in gigawatt hours and in other units used in the survey.

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 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).

6.2 Data sharing

Statistics on the energy consumption of agriculture and horticulture are published on the Natural Resources Institute Finland website every 3 to 4 years. 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.

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

Approximately every 3 to 4 years, together with the Farm Structure Survey.

10 Dissemination format

10.1 News release

The statistics are published every 3 to 4 years.

10.2 Publications

-

10.3 On-line database

PxWeb - Energy consumption of agriculture and horticulture

10.4 Other

-

10.5 Documentation of methodology

-

10.6 Quality documentation

-

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.

Checks for faulty data in the data collection application mostly prevent accidental mistakes. The data collected is reviewed and edited after data collection.

11.2 Quality assessment

The response material of the statistics is reviewed and edited with great focus on the data quality of large enterprises.

12 Relevance

12.1 User needs

-

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

-

13 Accuracy and reliability

13.1 Overall accuracy and reliability

The response rate of the Farm Structure Survey is approximately 95 %. Due to a large sample size, high response rate, and the imputation of missing data, the results are very reliable.

Data on the energy consumption of agriculture and horticulture is based on farmers' estimates. Generally, farmers are able to answer questions on an accurate enough level.

13.2 Sampling error

-

13.3 Non-sampling error

13.3.1 Coverage error

-

13.3.2 Measurement error

-

13.3.3 Non-response error

-

13.3.4 Processing error

-

13.3.5 Model-based error

-

14 Timeliness and punctuality

14.1 Timeliness

The statistics are published the year after the statistical 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

-

15.2 Comparability - over time

Data on the energy consumption of 2010 and 2013 is comparable. In these years, both farms and horticultural enterprises were included in the statistics. Prior to this, data on energy consumption has only been published separately on greenhouse enterprises.

15.3 Coherence - cross domain

The data is coherent with other statistics based on the register of agricultural and horticultural enterprises.

15.3.1 Coherence between sub annual and annual statistics

-

15.3.2 Coherence with National Accounts

-

15.4 Coherence - internal

-

16 Cost and burden

-

17 Statistical processing

17.1 Source data

The register of agricultural and horticultural enterprises is used as source data for the statistics. This register collects data on all Finnish farms practicing agriculture or horticulture with a financial size of over 2000 EUR. Most of the data content of the register is based on data collected from farmers in conjunction with authoritative functions of rural development administrations. Data is supplemented with other registers of the Finnish Food Authority, if necessary.

17.2 Frequency of data collection

Every 3 to 4 years.

17.3 Data collection

Data on the energy consumption of agriculture and horticulture is collected in the Farm Structure Survey every 3–4 years. Once every ten years the Farm Structure Survey is conducted as a census study (agricultural census).

Data is collected online or with phone interviews. Phone interviews are conducted by a third-party company.

Data from farms that did not respond is imputed by using mean imputation.

17.4 Data validation

Data validation and the quality assurance of results are conducted as described in the Farm Structure Survey.

17.5 Data compilation

-

17.6 Seasonal Adjustment

-

18 Comment

-