

Standard documentation Meta information

(Definitions, explanations, methods, quality)

on the

Farm Structure Survey

Full survey 2010

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Executive summary

The Farm Structure Survey provides important information about the structure of agricultural and forestry holdings and gives an overview of the development of structural changes in agriculture and forestry at both national and European level. On the basis of EU legislation, the Farm Structure Survey is currently conducted as a full survey every 10 years (at the end of the decade) and as a sample survey at regular intervals in between (most recently in 2003, 2005 and 2007; future sample surveys will be carried out in 2013 and 2016).

Data from the Farm Structure Survey is incorporated into many other areas of agricultural statistics and provides an essential basis for making informed agricultural policy decisions at national and international level (see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

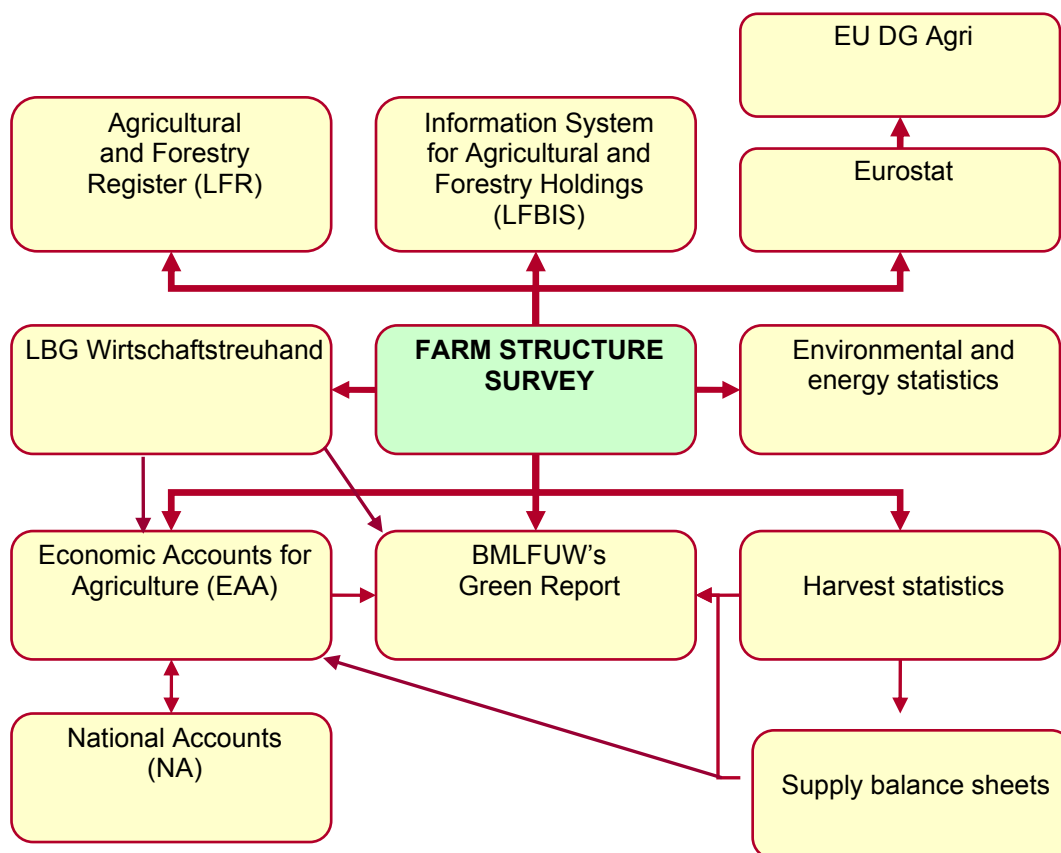


Figure 1: Users of Farm Structure Survey data

The statistics focus on the **farm structure** of agricultural and forestry holdings in 2010 with the following groups of characteristics: type of tenure, land use, labour force, livestock, other holding-specific data and rural development. The list of questions was predefined by existing EU legislation and was primarily based on the requirements of the European Commission, although comparability between the member states and with previous surveys was taken into consideration.

The applicable EU regulation stipulated that, in conjunction with the Farm Structure Survey 2010 (FSS 2010), a **Survey on Agricultural Production Methods (SAPM)** was to be carried out in which data on land management, irrigation, types of livestock housing and animal manure was to be recorded. Furthermore, issues of national importance (e.g. farm holidays) were also included in the survey programme. The Horticultural and Field Vegetable Cultivation Survey, which had previously been conducted separately at five to six year intervals, was also integrated into the Farm Structure Survey, albeit to a greatly reduced extent as a horticultural module.

The characteristics are collected as primary statistics from agricultural and forestry holdings and also provided by administrative data, as has been the case since 1997. Regulation (EC) No 1166/2008 permitted the use of data from the Integrated Administration and Control System (IACS), the Austrian programme for the promotion of environmentally friendly and extensive agriculture that protects natural habitats (ÖPUL), the Cattle Database (CDB), information from the IACS/ÖPUL system relating to organically farmed holdings and also funding data relating to rural development measures. In addition, Austria made an application to use data from the veterinary information system (VIS) and from the mineral oil tax refund (MÖST) as well.

The Farm Structure Survey 2010 was carried out with the participation of the municipalities as a **full survey** using an electronic questionnaire only. The amendments and high number of respondents combined with the extensive list of questions made it necessary to redesign the questionnaire. As a result, an e-Quest questionnaire (which could also be filled in offline) rather than a Web-based questionnaire was used.

The **universe** was formed by the active holding units entered in the Agricultural and Forestry Register (LFR), which are regularly updated using information from a variety of primary agricultural statistics surveys and by comparing the data with various administrative data sets (funding applications, etc.) and which meet the survey criteria on the basis of the most recent information available.

The definition of “holding” in the Farm Structure Survey is essentially based on the practice of **agricultural and forestry activities** (with exceptions specified in more detail in Section 2.1.1), although inclusion in **NACE Section A (Agriculture, forestry and fishing)** is not the only decisive factor. All agricultural and forestry holdings that meet the survey criteria relevant to the Farm Structure Survey had to be recorded, irrespective of whether the relevant holdings undertake these activities as primary or secondary activities. In contrast to various business statistics, the data only needs to be entered for the agricultural and forestry sector and includes primary and secondary activities alike.

In contrast to previous surveys, agricultural holdings were surveyed at the level of the agricultural enterprise for the first time in the Farm Structure Survey 2010. The survey unit (statistical unit) used was therefore the agricultural enterprise with its main holding and, if applicable, the associated agricultural and forestry sub-holdings. Around 7% of holdings had two or more sub-holdings of this kind (in many cases, these are Alpine pasture units). In comparison with the last full survey in 1999, this change did not have any serious effects since the issue of sub-holdings had not yet arisen to any significant extent. In the 1999 survey, the cultivated area of the holding had to be specified as a whole and was not to be divided between any permanent establishments.

In accordance with Eurostat’s requirements, the holdings were assigned geographically as far as possible according to their actual location if the relevant information was available. This was generally done using the main holding or – in its absence – an addressable object (e.g. in the case of agricultural communities, Alpine pasture holdings or woodland holdings) using the location of the most important parcel.

Farm Structure Survey 2010 – Important elements	
Main purpose of the statistics	<u>Farm Structure Survey (FSS 2010)</u> : records the farm structure of agricultural and forestry holdings Horticultural and field vegetable cultivation module (see separate standard documentation) <u>Survey on Agricultural Production Methods (SAPM 2010)</u>
Observed unit / reporting unit / presentation unit	Agricultural and forestry holdings (according to the Agricultural and Forestry Register) that meet specific recording criteria applicable to the Farm Structure Survey 173 317 holdings
Type of statistics	Primary statistical survey (full survey) using administrative data
Data sources/Survey techniques	<u>e-Quest questionnaire</u> with some data from administrative sources already entered (IACS including OPUL, Cattle Database, VIS, mineral oil tax refund) <u>Administrative data</u> (support measures for rural development) added after the survey In addition, the following sources were used for the specific breakdown of the results for publication of the national results: Land Register for Mountain Farms (AMA and BMLFUW) and definition of less favoured areas (BMLFUW).
Reference period or due day	<u>Due days:</u> 1 April 2010 Livestock characteristics 15 May 2010 Type of tenure and land characteristics in horticulture and field vegetable cultivation 31 October 2010 All other survey characteristics <u>Reference periods:</u> 1 November 2009 to 31 October 2010: Land characteristics, labour force, secondary activities and agricultural production methods 1 January 2008 to 31 December 2010: Landscape features, average irrigated area and support measures for rural development 1 January 2010 to 31 December 2010: Livestock characteristics if a livestock holding has no animal of the category reared on the due day of 1 April 2010. For information on reference periods and due days relating to the horticultural and field vegetable cultivation module, see the separate standard documentation.
Periodicity	10 years
Survey participation (primary statistics)	Compulsory
Legal bases	Regulation (EC) No 1166/2008 ; Regulation (EC) No 1200/2009 National legal basis: Regulation Federal Law Gazette (BGBl.) II No. 122/2010 (in German), based on the Federal Statistics Act 2000 , BGBl. I No. 163/1999, as amended by BGBl. I No. 136/2001, BGBl. I No. 71/2003, BGBl. I No. 92/2007, BGBl. I No. 125/2009, BGBl. I No. 111/2010
Regional breakdown	Municipalities
Availability of the results	FSS 2010: Preliminary data: t + 12 months Final data: t + 19 months SAPM 2010: t + 29 months

Other	<p>The definition of “holding” in the Farm Structure Survey is essentially based on the practice of agricultural and forestry activities (with exceptions specified in more detail in Section 2.1.1), although inclusion in NACE Section A (Agriculture, forestry and fishing) is not the only decisive factor. All agricultural and forestry holdings that meet the survey criteria relevant to the Farm Structure Survey had to be recorded, irrespective of whether the relevant holdings undertake these activities as primary or secondary activities.</p>
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1. General information

1.1 Objective and purpose, history

The Farm Structure Survey is one of the most important sources of statistical information about agriculture and forestry. The objective is to obtain up-to-date and comprehensive results about the **structural conditions** in Austrian agriculture and forestry and their comparability with the results of other EU member states. This information is needed to analyse the causes and background to structural change in this important sector of the economy and subsequently to draw specific conclusions for the future. This data provides an essential basis for making informed agricultural policy decisions at national and international level.

The results supply the basic data for the Economic Accounts for Agriculture and are incorporated inter alia into harvest statistics and supply balance sheets. In addition, the data is used in further calculations in the environmental and energy sectors and provides a basis, for example, for the development of indicators or for the weighting scheme of the index of agreed minimum wages. Moreover, the master data and data on holdings updated during the survey are used to update the Agricultural and Forestry Register.

Furthermore, the **distribution plan of returning holdings** drawn up by LBG Österreich GmbH Wirtschaftsprüfung & Steuerberatung is based on the results of the Farm Structure Survey. The company's analyses provide valuable information about the economic circumstances of agricultural and forestry holdings for the Green Report produced by the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW).

The sampling plan of the logging survey (**Logging Report [HEM]**) conducted by the BMLFUW is also updated using the results of the Farm Structure Survey.

The **first survey** of all agricultural and forestry holdings in Austria was conducted in 1902. Subsequent censuses of holdings were taken in 1930, 1939, 1951 and then at ten year intervals between 1960 and 1990. These were interspersed with land use surveys conducted at three to four year intervals and, from 1973 onwards, labour force surveys. In addition, machinery was recorded in separate surveys at six year intervals. The first Farm Structure Survey was conducted – on a sample basis – in 1993, although its list of questions was still largely based on that of the 1990 Agricultural Census in order to ensure continuity in the national time series. However, initial adaptations to EU requirements were made to take account of national needs. The list of questions for the survey conducted in 1995, the year that Austria joined the EU, was completely aligned with the requirements of the EU's list of characteristics. As a result of this change, a full survey was conducted on the recommendation of the national working group of the Advisory Committee on Agricultural Statistics. A sample survey followed in 1997, for which Austria was permitted to use administrative data for the first time.

The **last full survey** before the present survey took place at the turn of the decade, as planned by the European Union, with the member states being able to decide whether to conduct the survey in 1999 or 2000. In Austria, the Farm Structure Survey took place in 1999 with a due day of 1 June.

On the basis of current legislation, the Farm Structure Survey has to be conducted as a full survey every 10 years (at the end of the decade) and as a sample survey at regular intervals in between (most recently in 2003, 2005 and 2007; future sample surveys are planned for 2013 and 2016).

As of the Farm Structure Survey 2010, the list of questions has been adapted in line with the new requirements of the Common Agricultural Policy (CAP) and rural development policy.

1.2 Contracting entity

Ordered pursuant to Section 4 (1) of the [Federal Statistics Act 2000](#) (cf. 0 legal basis)
Responsible federal ministry: Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)

1.3 Main users

National institutions:

- Federal ministries
- Political institutions (National Assembly, Federal Assembly, provincial parliaments, etc.)
- Representative associations (e.g. social partners, chambers, professional organisations)
- Regional authorities (federal government, federal provinces, municipalities)
- Statistics Austria (internal users)
- Austrian Institute of Economic Research (WIFO)
- Federal Institute of Agricultural Economics (AWI)
- Federal Institute for Less Favoured and Mountainous Areas
- Environment Agency Austria
- Agency for Health and Food Safety (AGES)

International institutions:

- European Commission/Eurostat

Non-institutional users:

- Media
- Educational institutions
- Enterprises
- General public

1.4 Legal basis

National legal basis:

[Federal Law Gazette I No. 163/1999](#) – Federal Act on Federal Statistics (Federal Statistics Act 2000), last amended by Federal Law Gazette I No. 111/2010 of 30 December 2010

[Federal Law Gazette II No. 122/2010](#) (in German) – Regulation of the Federal Minister for Agriculture, Forestry, Environment and Water Management relating to the compilation of statistics on agricultural structure and on agricultural production methods in 2010

EU legal basis:

[Regulation \(EC\) No 1166/2008](#) of the European Parliament and of the Council of 19 November 2008 on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) No 571/88

[Commission Regulation \(EC\) No 1200/2009](#) of 30 November 2009 implementing Regulation (EC) No 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods, as regards livestock unit coefficients and definitions of the characteristics; last amended by correction, OJ L 113 of 3.5.2011, p. 12 (1200/2009)

2. Concepts and processing

2.1 Statistical concepts and methodology

2.1.1 Statistical purpose

The statistics focus on observing the **farm structure of agricultural and forestry holdings in 2010** with the following groups of characteristics: type of tenure, land use, livestock, organic farming, secondary activities, labour force, uptake of support measures for rural development and other holding-specific data. Structural data on horticultural and field vegetable cultivation was collected in an additional module (see separate standard documentation).

In conjunction with the Farm Structure Survey, a Survey on Agricultural Production Methods (**SAPM 2010**) covering land management, irrigation, types of livestock housing and farm-produced fertiliser usage also had to be carried out.

The Farm Structure Survey **defines an agricultural and forestry holding** as follows: An agricultural and forestry holding is a single unit, both technically and economically, which has a single management and which undertakes agricultural and forestry activities either as its primary or secondary activity, produces agricultural and forestry products or maintains its land that is no longer used for production purposes in good agricultural and environmental condition. The holding may also provide other (non-agricultural) products and services. All holdings that meet the criteria of the Farm Structure Survey must be recorded in the Farm Structure Survey, irrespective of whether agriculture is undertaken as a primary or secondary activity. However, only the agricultural and forestry part of the holding is included in the Farm Structure Survey, in other words only the scope of activity that represents agricultural and forestry work is taken into account. Holdings are not classified by their main area of activity as is the case, for instance, in business statistics.

The definition of “holding” in the Farm Structure Survey is therefore essentially based on the practice of **agricultural and forestry activities**, with the exception of activities in division 03 (Fishing and aquaculture) or the breeding and keeping of domestic animals. In the case of activities related to the provision of agricultural or forestry services, only units that maintained agricultural land in good agricultural and environmental condition were included. Inclusion in **NACE Section A (Agriculture, forestry and fishing)** is not the only decisive factor here since all agricultural and forestry holdings that meet the survey thresholds relevant to the Farm Structure Survey had to be recorded, irrespective of whether the relevant holdings undertake these activities as primary or secondary activities. In contrast to various business statistics, the data only needs to be entered for the agricultural and forestry sector and includes full-time and part-time activities alike.

The general conditions for the due days or reference periods, which are aligned with agricultural production processes, are stipulated by the current EU legal basis. The national regulation specifies the due days in the Farm Structure Survey to harmonise with circumstances particular to Austria, especially in terms of reducing the burden on respondents (such as alignment with the due days in subsidy processing and/or in less labour intensive periods in agriculture).

The due days were:

1 April 2010	for livestock characteristics
15 May 2010	for the type of tenure and land characteristics in horticulture and field vegetable cultivation
31 October 2010	for all other survey characteristics.

Deviating from this, the following reference periods were specified:

1 November 2009 to 31 October 2010 for land characteristics, labour force, secondary activities and agricultural production methods

1 January 2008 to 31 December 2010 for landscape features, average irrigated area and support measures for rural development.

The reference periods that apply to the horticultural module can be found in the standard documentation on the Horticultural and Field Vegetable Cultivation Survey.

2.1.2 Observed unit / reporting unit / presentation unit

According to the applicable EU regulation, “**holding**” is defined as follows: An agricultural and forestry holding is a single unit, both technically and economically, which has a single management, which produces agricultural and forestry products or maintains its land that is no longer used for production purposes in good agricultural and environmental condition, irrespective of whether it undertakes agricultural and forestry activities as its primary or secondary activity. The holding may also provide other (non-agricultural) products and services (cf. Figure 2).

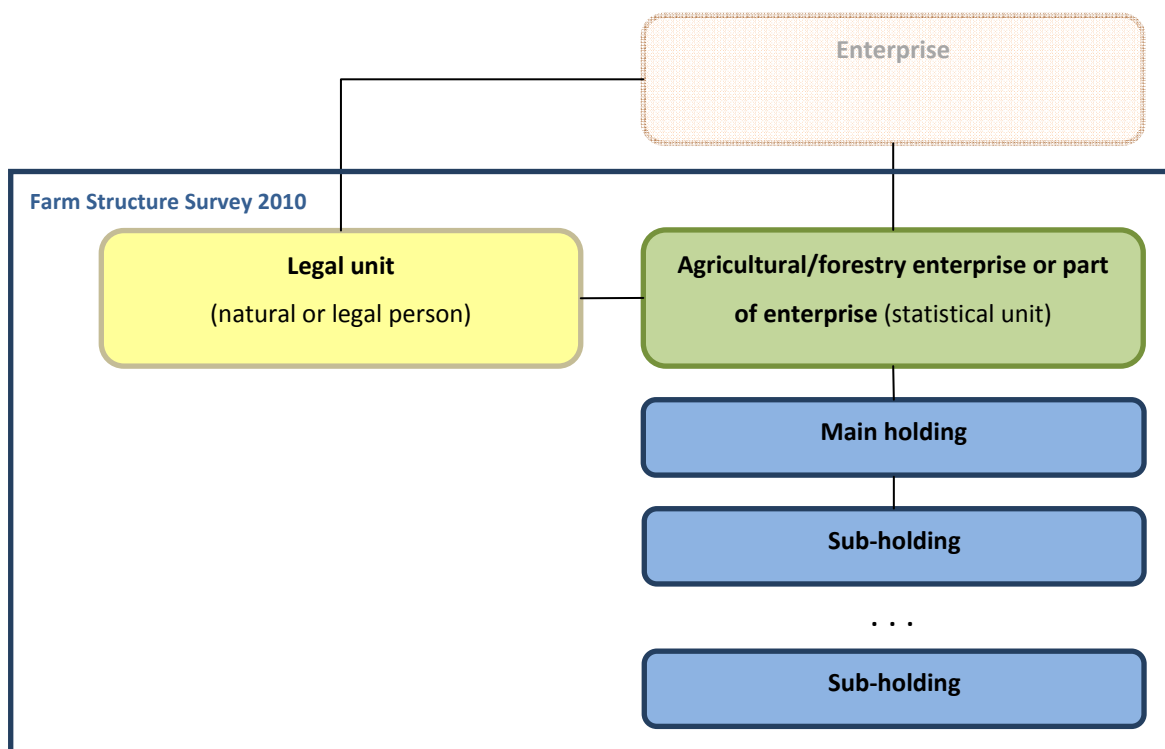


Figure 2: Diagram showing the links between legal unit, enterprise, agricultural and forestry enterprise, and holdings

IACS defines a holding as an enterprise (main holding). It includes all the production units (permanent establishments) managed by a holding operator. An enterprise (main holding) can consist of one or more sub-holdings.

In line with this definition, which is also used in the Green Report, the agricultural holding was – for the first time and in contrast to previous surveys – surveyed at the level of the agricultural and forestry enterprise in the Farm Structure Survey 2010. The survey unit (statistical unit) used was therefore the agricultural and forestry enterprise with its main holding and, if applicable, with the associated agricultural and forestry sub-holdings. Around 7% of holdings had two or more sub-holdings (in many cases, these are Alpine pasture units).

In accordance with Eurostat's requirements, the holdings were assigned geographically as far as possible according to their actual location if the relevant information was available. This was generally done using the main holding or – in its absence – an addressable object (e.g. in the case of agricultural communities, Alpine pasture holdings or woodland holdings) using the location of the most important parcel.

The statistical **survey units** cover the following holdings (minimum survey thresholds):

- agricultural and forestry holdings with a utilised agricultural area of at least 1 hectare
- vineyards with at least 25 ares of commercial wine growing area
- holdings with at least 15 ares of land used intensively as fruit orchards or 10 ares of land used for soft fruit, strawberries, vegetables, flowers or ornamental plants or vine, forestry and tree nurseries
- holdings that grow crops in greenhouses (greenhouse, polytunnel, cloche) with a minimum size of 1 are for predominantly commercial purposes
- forestry holdings with at least 3 ha of wooded area
- livestock holdings with at least 3 cattle or at least 5 pigs or at least 10 sheep or at least 10 goats or at least 100 poultry of any type.

All holdings that meet the criteria of the Farm Structure Survey (see above) must be recorded in the Farm Structure Survey, **irrespective** of whether agriculture and forestry is undertaken as a **primary or secondary activity**. However, only the agricultural and forestry part of the holding is included in the Farm Structure Survey, in other words only the scope of activity that represents agricultural and forestry work is taken into account. Holdings are not classified by their main area of activity as is the case, for instance, in business statistics.

2.1.3 Data sources, coverage

The following data sources were used for the Farm Structure Survey 2010 (cf. Figure 3 and Table 1):

1. Primary statistical survey of agricultural and forestry holdings

2. Administrative data: Article 4 (1) of Regulation (EC) No 1166/2008 regulates the use of the following administrative data:

- Integrated Administration and Control System (IACS; multiple application), including the Austrian programme for the promotion of environmentally friendly and extensive agriculture that protects natural habitats (ÖPUL)
- system for identifying and registering cattle (Cattle Database [CDB])
- organically farmed holdings: relevant information from the IACS/ÖPUL system was forwarded to Statistics Austria by the BMLFUW
- funding data relating to rural development measures.

Moreover, based on Article 4 (2) of the above-mentioned regulation, the use of the following sources as additional instruments for the use of administrative data was requested and approved:

- veterinary information system (VIS)
- mineral oil tax refund (MÖST)

To this end, a description of the methods used and information about the quality of the data sources had to be submitted to Eurostat.

For publication of the national results, the following sources were also used in order to provide a specific breakdown of the results:

- Land Register for Mountain Farms: Data on the points in the Land Register for Mountain Farms that are used to divide mountain farm holdings into groups in the land register was collected by AMA in the course of multiple area applications and made available by the BMLFUW.
- Less favoured areas: The definition of less favoured areas was submitted by the BMLFUW.

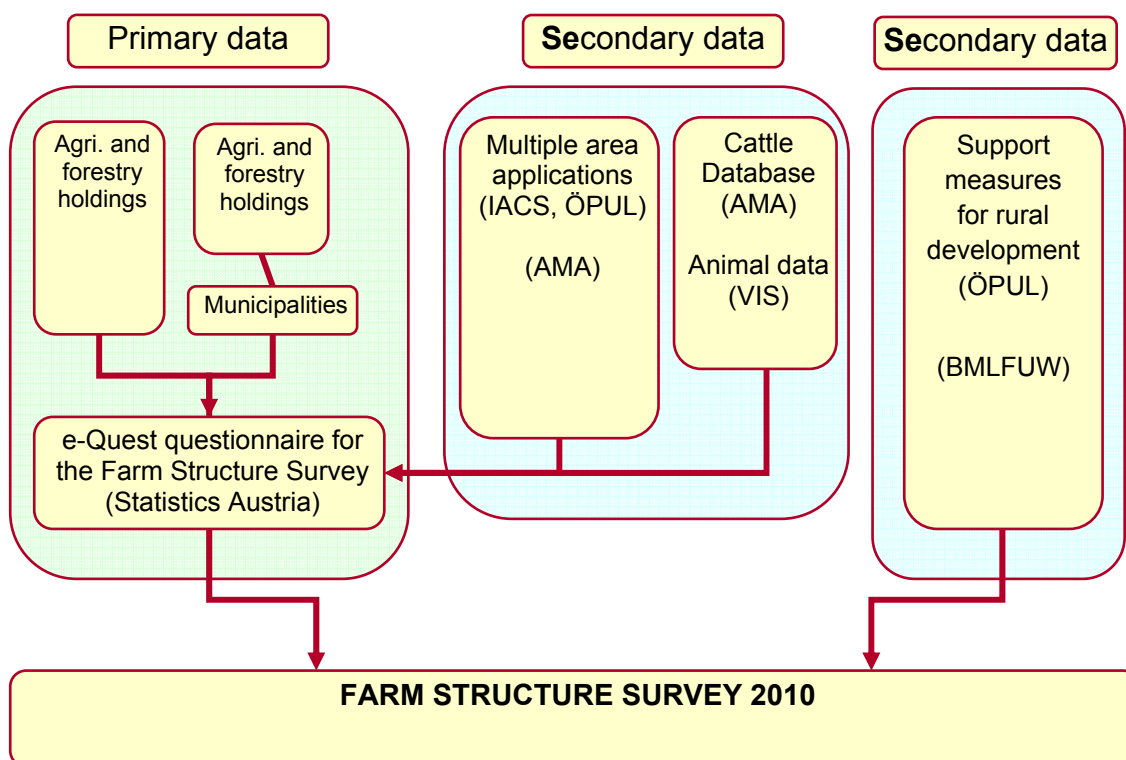


Figure 3: Data sources for the Farm Structure Survey 2010

Table 1: Data sources for the groups of characteristics

Group of characteristics	Primary data from survey	Secondary data
Type of tenure (ownership, lease)		
Crops on arable land		IACS (multiple area applications) ¹
Land use, crop types		IACS (multiple area applications), MÖST ¹
Farming system and methods (organic farming, direct marketing)		ÖPUL ¹
Module: irrigation		
Land management		
Module: horticulture and field vegetable cultivation		
Cattle population		Cattle Database ²
Other livestock		VIS ¹
Farming methods; grazing		
Farm-produced fertilisers		
Secondary activities		
Agricultural and forestry workers from the family and other persons in the household of the holding		
Non-family agricultural and forestry workers		
Support measures for rural development		BMLFUW (ÖPUL) ³
Breakdown characteristics		
Land Register for Mountain Farms points		BMLFUW (AMA)
Less favoured areas		BMLFUW

- 1) Information obtained from administrative data was already entered in the personalised questionnaires. For example, the Computing and Technology Centre for Agriculture, Forestry and Water Management (LFRZ) was tasked by the BMLFUW with evaluating the IACS data for the areas of crops on arable land and for the crop types. To this end, Statistics Austria first needed to predefine the relevant assignments for the data obtained from the IACS multiple applications on the items required according to the survey programme for the Farm Structure Survey. The data file created by the LFRZ contained the data on individual holdings that was required for the Farm Structure Survey and which was used to create the initial data set for the personalised questionnaires; in other words, individual area data was already shown for each holding. The same applies to the livestock data in the Cattle Database and the veterinary information system (VIS). The only primary statistics that needed to be added were the characteristics or holdings for which no secondary data was available.
- 2) Despite complete coverage, the cattle population was already entered in the questionnaire since it was relevant to other content of the survey (farming methods, grazing) and was therefore used as a point of reference for plausibility checks in the questionnaire.
- 3) The administrative data on the support measures for rural development that were taken up was only added to the data set after the survey since it can be completely covered by administrative data and there is no plausibility-related interdependence with other characteristics.

2.1.4 Reporting unit and respondents

Natural and legal persons as well as partnerships under commercial law that operate a statistical unit (see 2.1.2) in their own name were **obliged to submit information**.

Under Section 8 of the national regulation (Federal Law Gazette II No. 122/2010), the municipalities (through the mayor) had to help in the survey by providing survey assistants who filled out the electronic questionnaires following verbal questioning of the respondents. To this end, Statistics Austria had provided training for the municipal survey assistants and had notified the relevant municipalities of the addresses of the holdings. As a result of their knowledge of local conditions and holding structures, the municipalities made a valuable contribution in conducting the survey and in issuing reminders to non-responding holdings.¹

The duties of cooperation for owners of administrative data are regulated in Section 11 of the regulation relating to the compilation of statistics on agricultural structure.

2.1.5 Survey format

Full survey using administrative data

2.1.6 Survey techniques / data transmission

The selection framework for the Farm Structure Survey consisted of the active holding units listed in the Agricultural and Forestry Register (LFR), which are updated on an ongoing basis using information from various primary agricultural statistics surveys and by comparison with various administrative data sets (funding applications, etc.) and which meet the survey criteria on the basis of the latest information available.

The Farm Structure Survey 2010 was conducted using an **electronic questionnaire** only. The amendments and high number of respondents combined with the extensive list of questions made it necessary to redesign the questionnaire (e-Quest). To check the comprehensibility and functionality of the questionnaire, the development phase was followed by a test run that also involved external experts.

Due to the redesign of the questionnaire and the new topic areas covered by the survey for the first time, training events were held for the municipalities in all district capitals and in Vienna from early September 2010 to mid-October 2010. The training courses were run by Statistics Austria staff, with the events being designed to familiarise the survey assistants commissioned to carry out the Farm Structure Survey with the execution of the survey, taking into account the stipulated deadlines. In addition, the trainers introduced the electronic questionnaire and explained how to use and complete it correctly.

In October 2010 the provincial government offices were asked by Statistics Austria to issue implementation instructions through official channels to the administrative district authorities, municipal departments of towns with their own statute, and municipalities. These letters contained key information, such as procedures and deadlines for return of the questionnaire, to guarantee smooth execution of the survey.

¹ In future, farm structure surveys will be conducted without the support of the municipalities.

During the survey phase, farmers had the option to submit their form **either directly** from their own computer by entering their user identification and password (direct respondent) **or via a computer at the competent municipal office** (see Figure 4).

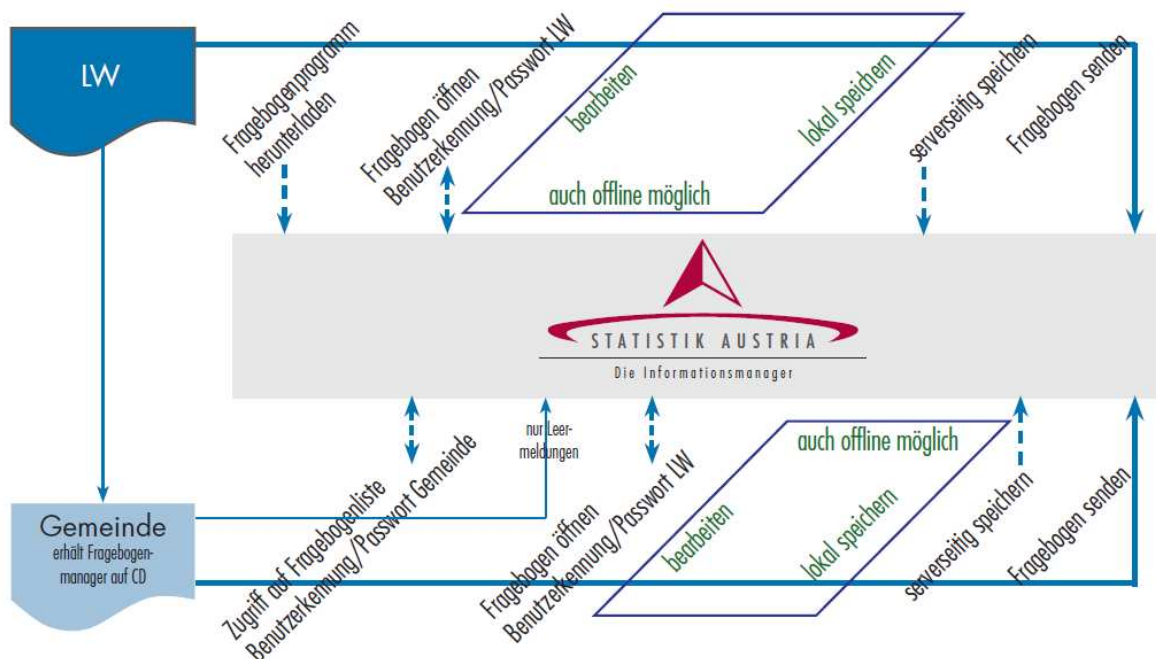


Figure 4: Reporting options. -

Legend for figure 4: LW = farmer; Fragebogenprogramm herunterladen = download questionnaire program; Fragebogen öffnen = open questionnaire; Benutzereerkennung/Passwort LW = farmer's user ID/password; bearbeiten = process; auch offline möglich = also possible offline; lokal speichern = save locally; serverseitig speichern = save on server; Fragebogen senden = send questionnaire; Gemeinde erhält Fragebogenmanager auf CD = municipality receives questionnaire manager on CD; Zugriff auf Fragebogenliste = access to questionnaire list; Benutzereerkennung/Passwort Gemeinde = municipality's user ID/password; nur Leermeldungen = only blank forms;

The survey took the form of a personalised electronic questionnaire, i.e. the name and address of the holdings and certain administrative data items were already entered and only had to be checked and, if necessary, corrected. In conjunction with the respondent-specific key, e-Quest guarantees a high standard of security in terms of data protection law. Detailed information about the use of the electronic questionnaire and the execution of the Farm Structure Survey was directly forwarded to both respondents and municipalities in October 2010. For the farmer, this information consisted of an accompanying letter, a cover letter from the Austrian Chamber of Agriculture (LKÖ), a survey folder and instructions on how to fill in the electronic questionnaire. In addition, explanations regarding the content and the survey criteria could be downloaded via the Internet.

The municipalities also received a [handbook](#) (in German) containing explanations for municipalities, a CD with the questionnaire manager, lists of addresses of the holdings to be surveyed and “**Official notices**” that had to be displayed in the local area at a variety of clearly visible sites.

A free hotline for respondents was set up by Statistics Austria to answer any questions that arose during the survey phase. In addition, any queries could be e-mailed to agrarstrukturerhebung@statistik.gv.at.

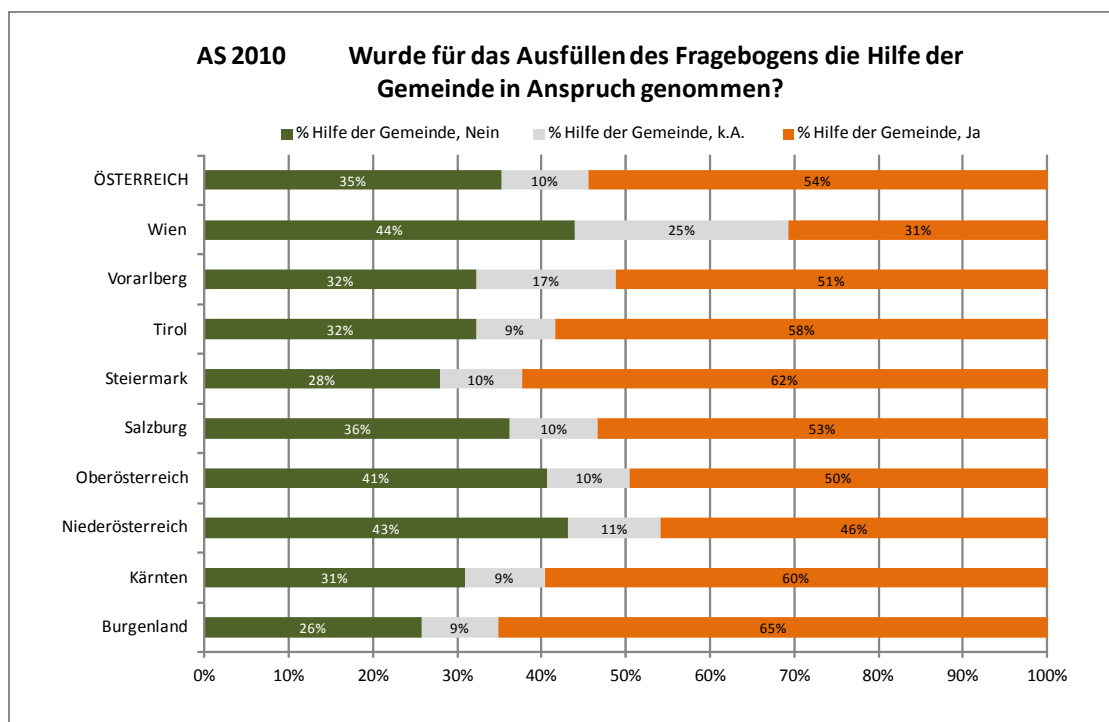


Figure 5: Proportion of direct respondents by federal province

Legend for figure 5: AS2010 = FSS 2010; Wurde für das Ausfüllen des Fragebogens die Hilfe der Gemeinde in Anspruch genommen = Was help sought from the municipality when filling out the questionnaire?; % Hilfe der Gemeinde, Nein = % help from municipality, no; % Hilfe der Gemeinde, k.A. = % help from municipality, no reply; % Hilfe der Gemeinde, Ja = % help from municipality, yes; ÖSTERREICH = AUSTRIA; Wien = Vienna; Tirol = Tyrol; Steiermark = Styria; Oberösterreich = Upper Austria; Niederösterreich = Lower Austria; Kärnten = Carinthia;

Analysis of the voluntary questions on the survey showed that 35% were **direct respondents** and 54% non-direct respondents. The remainder did not state whether they were direct or non-direct respondents (cf. Figure 5). Respondents who took advantage of the service offered by the municipalities visited the municipality on an agreed date with their access data (user identification and password) and the prepared data and/or required documents. The competent municipal employee logged onto the municipal computer using the farmer's access data, accessed the farmer's survey questionnaire and helped him or her to fill in the electronic questionnaire.

The municipalities were provided with a **questionnaire manager** on CD to help them conduct their survey work. When installed on their on-site computer, this application – in contrast to previous surveys (sample surveys in 2005 and 2007) – enabled municipal employees to also work offline. Moreover, the municipalities could access a list of holdings (consisting of all holdings in the municipal area that were still to be surveyed) by entering their own access data (user identification and password). This list of holdings helped the municipalities during the reminder phase since the holdings that had sent their questionnaires directly to Statistics Austria were removed from the list of holdings each time the server was synchronised. In other words, the only holdings that still appeared were those that had not yet returned their form to Statistics Austria and that therefore needed to be reminded or summoned to do so by the municipality. A survey that the farmer had already started to fill in at home could also be completed at the municipal office provided that the survey had been saved centrally on Statistics Austria's web server before it was closed.

Holdings that no longer existed (sold, leased, etc.) had to be called up from the list of holdings by the municipality and, after the relevant reason for the blank form had been selected, were returned as a blank form.

2.1.7 Survey questionnaire (including explanatory notes)

Exclusive use of an electronic questionnaire: [e-Quest questionnaire](#) (in German)

The following **survey documents** (all in German) were sent to the respondents:

- [Accompanying letter](#)
- [Cover letter](#) from the Austrian Chamber of Agriculture
- [Survey folder](#)
- [Instructions](#) on how to fill in the electronic questionnaire (for farmers)

The e-Quest survey questionnaire, including the relevant explanations, was available on the Statistics Austria website under [Surveys](#).

In addition, the following **survey documents were available to download** (all in German):

- [Cover letter](#) from the Austrian Chamber of Agriculture
- [Survey folder](#)
- [Instructions](#) on how to fill in the electronic questionnaire (for farmers)
- [Survey criteria](#) (download)
- [Explanations regarding the content](#) (download)

The municipalities were also provided with notifications and additional documents (regarding changes and updates, for example), which they were able to download from a dedicated information website.

2.1.8 Survey participation

Section 6 of the regulation relating to statistics on the structure of agricultural holdings and agricultural production methods in 2010 ([Federal Law Gazette II No. 122/2010](#), in German) imposed an obligation to provide information.

2.1.9 Variables surveyed and derived, indicators (including definitions)

In accordance with [Federal Law Gazette II No. 122/2010](#) (in German)

The set of questions was specified by the **current EU legal basis** and was primarily based on the requirements of the European Commission, with comparability between member states and with previous surveys also being taken into consideration. In addition to recording land use, the Farm Structure Survey 2010 focused inter alia on the following groups of characteristics: type of tenure, labour force, livestock, other holding-specific data and rural development.

Under the EU regulation in force, a Survey on Agricultural Production Methods (SAPM) had to be carried out in conjunction with the Farm Structure Survey 2010. Data on land management, irrigation, types of livestock housing and animal manure was to be recorded in the SAPM.

In order to meet national requirements, the list of characteristics was adapted to national circumstances by the Advisory Committee on Agricultural Statistics. Issues of national importance (e.g. farm holidays) were also included in the survey programme.

The Horticultural and Field Vegetable Cultivation Surveys, which had previously been conducted separately at five to six year intervals, were also integrated into the Farm Structure Survey – albeit to a greatly reduced extent in comparison with the separately conducted surveys – as a horticultural module. The results of the horticultural module were published by Statistics Austria in a separate publication, Horticultural and Field Vegetable Cultivation Survey 2010; the survey itself was documented in separate standard documentation.

More details about the survey programme for the Farm Structure Survey 2010 can be found in the above-mentioned regulation and in the electronic questionnaire (see 2.1.7).

Survey characteristics by group of characteristics (for details, see [Survey characteristics](#) [in German]):

GENERAL CHARACTERISTICS

- Master data
- Legal form of the holding
- Type of tenure
- Farming system: organic farming

CULTIVATED AREA (in ares)

- Crops on arable land (main use)
- Permanent crops
- Permanent pasture
- Total utilised agricultural area
- Area not used for agricultural purposes
- Total area
- Mushrooms, irrigation, energy crops

LIVESTOCK (number of animals)

- Horses and other equidae
- Bovine animals
- Sheep (of any age)
- Goats (of any age)
- Pigs
- Poultry
- Bees (number of hives)
- Other farm animals

EQUIPMENT FOR RENEWABLE ENERGY PRODUCTION – EQUIPMENT USED BY TYPE OF ENERGY SOURCE

- Wind energy
- Biomass (including bio-methane)
- Solar energy
- Hydropower
- Other types of renewable energy sources

LABOUR FORCE AND OTHER PERSONS IN THE AGRICULTURAL AND FORESTRY HOLDING HOUSEHOLD

Agricultural and forestry work in the holding and other gainful activities (non-agricultural and non-forestry work on the holding and work outside the holding)

- Family labour and other persons in the holding household
- Non-family labour
- Utilisation of agricultural and forestry services

SECONDARY ACTIVITIES (OTHER GAINFUL ACTIVITIES) OF THE HOLDING (directly related to the holding)

- Tourism, accommodation and other leisure activities
- Handicraft
- Processing and sale of farm products
- Production of renewable energy for the market
- Wood processing (e.g. sawing)
- Aquaculture
- Contractual work using production means of the holding (agricultural (for other holdings), non-agricultural)
- Forestry
- Other
- Other gainful activities directly related to the holding as a percentage of the final output of the holding

SUPPORT FOR RURAL DEVELOPMENT

- Holding benefited from certain rural development measures during the last three years

AGRICULTURAL PRODUCTION METHODS

- Tillage methods
- Soil conservation (soil cover in winter and crop rotation)
- Landscape features
- Animal grazing

- Animal housing (number of places)
- Manure application
- Manure storage and treatment facilities
- Irrigation (module)

HORTICULTURAL AND FIELD VEGETABLE CULTIVATION (MODULE, dealt with in separate standard documentation)

EXTENSIVE FRUIT GROWING (additional national questions)

- Number of trees (apples, pears, plums)

TOURISM (additional national questions)

- Number of guest rooms
- Number of associated beds (including extra beds)
- Number of holiday apartments
- Number of associated beds (including extra beds)
- One-season operation (yes/no)
- Two-season operation (yes/no)
- Full-/half-board available (yes/no)
- Bed and breakfast available (yes/no)

Derived variables:

The most important variables derived in the Farm Structure Survey are standard output, the form of holding that can be derived therefrom, assignment of the holdings to the individual groups of points in the Land Register for Mountain Farms (BHK), assignment to the types of activity, breakdown by size category and the livestock unit (LU).

Standard output is a standardised figure describing the average monetary value (in euros) of the gross agricultural production of an agricultural holding. It is used in official statistics to classify agricultural holdings by type of farming. **Standard output is determined as gross monetary output per unit of area of a crop type or per animal unit of a livestock category by multiplying the quantity produced by the associated farm-gate price.** Average yields and prices are used, which are calculated for a reference period of five marketing years. The total standard output of each holding describes the market performance of the entire agricultural holding. The standard output coefficients are calculated by multiplying production per unit/characteristic by the relevant farm-gate price for the region. VAT, taxes on products and direct payments are not included. These standard output coefficients are determined by the Federal Institute of Agricultural Economics in line with European Union requirements and submitted to Statistics Austria for calculation of the total standard output of each agricultural and forestry holding. Multiplying the standard output coefficient by the livestock numbers and areas under cultivation determined in the Farm Structure Survey gives the total standard output (TSO) of the holding, which is used to characterise its economic size. Output is the sum of the value of the principal product(s) and of the secondary product(s).

In accordance with [Commission Regulation \(EC\) No 1242/2008](#) of 8 December 2008 establishing a Community typology for agricultural holdings, agricultural holdings have now been reclassified according to the **form of holding**, based on the distribution of the standard output (SO). Both the previous EU holding classification system and the national holding classification system were based on what is known as standard gross margins (SGM).

A **three-stage process** is used to assign a holding to a form (or type) of holding, with the assignment being determined on the basis of the proportion of the standard output accounted for by the individual branches of the holding. The query sequence is decisive with regard to the form to which a holding belongs (also see Table 2):

1. Query whether the criteria for the “forestry holdings” form are met
2. Query whether the criteria for the “horticultural holdings” form are met
3. Assignment to the agricultural forms of holding

Table 2: Assignment of holdings to forms and types of holding

Forms of holding	Types of holding	Proportion of the standard output (SO) of the holding	
Forestry	Forestry	Forestry	SO forestry > 1/3 TSO and > SO horticulture
Horticulture	Specialist forestry Horticulture Specialist horticulture	Horticulture	SO horticulture > 1/3 SO agriculture and horticulture
Market crops	Specialist cereals, oilseeds and protein crops General field cropping	Market crops	> 2/3 SO agriculture and horticulture
Permanent crops	Specialist vineyards Specialist fruit and citrus fruit Various permanent crops combined	Permanent crops	> 2/3 SO agriculture and horticulture
Fodder crops	Specialist dairying Specialist cattle – rearing and fattening Cattle – dairying, rearing and fattening combined Sheep, goats and other grazing livestock	Fodder crops	> 2/3 SO agriculture and horticulture
Granivores	Specialist pigs Specialist poultry Various granivores combined	Granivores	> 2/3 SO agriculture and horticulture
Mixed agriculture	Mixed cropping Mixed livestock, mainly grazing livestock Mixed livestock, mainly granivores Field crops-grazing livestock combined Various crops and livestock combined	Market crops, fodder crops, granivores and permanent crops respectively	< 2/3 SO agriculture and horticulture
Farming communities	Farming communities – forestry Farming communities – agriculture Farming communities – mixed agriculture and forestry	Farming communities	
Non-classifiable holdings			

The **points in the Land Register for Mountain Farms (BHK)** are used to divide mountain farm holdings into groups based on the natural and economic difficulties that they face. The holdings are evaluated by AMA in the course of the annual multiple area applications on the basis of BMLFUW guidelines using difficulty criteria grouped into three main categories: internal infrastructure, external infrastructure, and climate and soil conditions. Each individual criterion is evaluated in a standardised manner according to a nationally developed scheme (theoretical maximum number of points: 570 BHK points). The total number of points for the individual criteria gives the BHK points figure for a holding.

The BHK groups are as follows:

BHK group 1:	up to 90 BHK points
BHK group 2:	91 to 180 BHK points
BHK group 3:	181 to 270 BHK points
BHK group 4:	over 270 BHK points

The holdings are broken down by **type of activity** according to the length of time that holding operators² spend on their own agricultural and forestry holding or outside the agricultural holding, with a distinction being made between the following two groups:

- 1. Holdings where farming is the primary activity:** Holding on which the holding operators spent at least 50% of their total working time in the survey year on the agricultural and forestry holding; less than 50% of their total working time was therefore spent on non-

² The actual EU term is “holder” (*Betriebsinhaber*). In practice, the term “holding operator” (*Bewirtschafter*) is more understandable for farmers in Austria and leads to fewer misunderstandings (the term *Betriebsinhaber* is equated in Austria with “owner”, which does not correspond to the EU definition for the Farm Structure Survey).

agricultural work. An additional prerequisite was a minimum standard output of 8 000 euros (there was a minimum standard gross margin of 90 000 Austrian Schillings from 1995 to 1999 and a minimum standard gross margin of 6 000 euros from 2003 up to 2010).

2. **Holdings where farming is a secondary activity:** Holding on which the holding operators spent less than 50% of their total working time on the agricultural holding; at least 50% of their total working time was therefore spent on non-agricultural work.

Livestock numbers are expressed as **livestock units (LU)** in a number of charts and figures in order to be able to group together various categories of livestock in a single figure for comparison purposes. The livestock unit can be described as a common unit. To this end, figures for the individual livestock categories are converted into LU. A conversion formula is specified for each livestock category, according to age groups and forms of use.

2.1.10 Classifications used

The following classifications were used for the Farm Structure Survey 2010:

- **NUTS:** Classification system of territorial units for statistical purposes for the regional assignment of holdings and presentation of the results
- **Statistics Austria's municipality identifiers:** The municipality identifier was used to determine the region to which an agricultural and forestry holding belongs, which subsequently provides the basis for the reporting of municipality results. The municipality identifier was also used to assign holdings to "less favoured areas".
- **NACE classification:** System of economic activities. Holdings in the Farm Structure Survey are generally classified within Section A under the NACE system. The following must be taken into consideration, however: All holdings that meet the criteria of the Farm Structure Survey must be recorded in the Farm Structure Survey, irrespective of whether agriculture and forestry is undertaken as a primary or secondary activity. However, only the agricultural and forestry part of the holding is included in the Farm Structure Survey, in other words only the scope of activity that represents agricultural and forestry work is taken into account. In the Farm Structure Survey holdings are classified by their main area of activity only within Section A, with no account being taken of any other economic activities that may be performed.

Systematic breakdown

The results are broken down in the various tables by categories such as forms of holding, BHK groups, types of activity, NACE and various size categories, such as for example:

Breakdown by size categories of total area

	no area	
	less than	1 ha
1	to less than	2 ha
2	to less than	5 ha
5	to less than	10 ha
10	to less than	20 ha
20	to less than	30 ha
30	to less than	50 ha
50	to less than	100 ha
100	to less than	200 ha
200	to less than	500 ha
500	to less than	1 000 ha
1 000	ha and above	

Breakdown by size categories of cultivated area and by size categories of utilised agricultural area

	less than	1 ha
1	to less than	2 ha
2	to less than	5 ha

5	to less than	10	ha
10	to less than	20	ha
20	to less than	30	ha
30	to less than	50	ha
50	to less than	100	ha
100	to less than	200	ha
200	ha and above		

Breakdown by size categories of standard output (SO) in 1 000 euros

	less than	2
2	to less than	8
8	to less than	15
15	to less than	30
30	to less than	50
50	to less than	100
100	to less than	350
350	to less than	500
500	to less than	1 000
1 000	and above	

2.1.11 Regional breakdown of the results

The results are published nationally and broken down regionally in line with NUTS:

Austria

NUTS 2 (federal provinces)

LAU 2 (municipalities)

In addition, the results are reported at political district level as well as being broken down by production area due to the variety of landscapes and climates within Austria.

The individual main production areas are found in the following federal provinces:

- High Alps: Carinthia, Salzburg, Styria, Tyrol, Vorarlberg
- Pre-Alps: Lower Austria, Upper Austria, Salzburg, Styria, Vorarlberg, Vienna
- Eastern edge of the Alps: Burgenland, Carinthia, Lower Austria, Styria
- Waldviertel and Mühlviertel: Lower Austria, Upper Austria
- Carinthian Basin: Carinthia
- Alpine foothills: Lower Austria, Upper Austria, Salzburg, Vorarlberg
- South eastern flat and hilly country: Burgenland, Styria
- North eastern flat and hilly country: Burgenland, Lower Austria, Vienna

2.2 Production of statistics, processing, quality assurance measures

2.2.1 Data capture

Since, as had already been the case for the sample surveys in 2005 and 2007, only an electronic questionnaire was used, **no separate data capture** was necessary. The data was able to be transferred directly from the electronic questionnaire to the database.

The data was **linked with the administrative data** that was only added to the primary data after the survey by means of direct linkage using the LFBIS number.

To merge the data with that of the Farm Structure Survey, it needed to be processed accordingly. Since funding and statistical bodies have different objectives, the occasional inconsistency occurred when the various data items on individual holdings were merged and this needed to be resolved by research (cf. also 3.2.1.1 Quality of data sources used – secondary data).

2.2.2 Coding

Coding in the statistical/technical sense is not necessary due to the design of the electronic reporting media.

2.2.3 Editing and verification of data sources used

The data sets in the Farm Structure Survey were subjected to analysis by a specialist in the field.

Check for completeness (return control)

Under Section 8 of the Farm Structure Survey regulation [Federal Law Gazette II No. 122/2010](#) (available in German only), the **municipalities** were responsible for ensuring that the completed questionnaires were sent electronically and in due time to Statistics Austria. The issuing of reminders to non-responding holdings was therefore primarily the responsibility of the municipalities. In order to track the return of the forms quickly and to ensure that the process was as up-to-date as possible, a database was created with the necessary information (up-to-date status of the data from the e-Quest monitor as well as information on the holdings, the competent administrative office [municipality, municipal authority or administrative district authority] and other administrative data). This database was used to monitor the degree of completion of the survey on an ongoing basis. The relevant reminder measures primarily took the form of reminder e-mails to non-responding municipalities or phone calls.

Plausibility check

In principle, a distinction is made between plausibility at micro level and plausibility at macro level.

Plausibility at micro level

The **electronic questionnaire** was designed in such a way that the data entered was checked for plausibility in the most important sections either while the questionnaire was being filled in or before it was sent off. The questionnaire could only be sent off after any errors identified in the error check had been corrected. In order not to overload the questionnaire application and make it unnecessarily difficult for the respondents to use, this immediate plausibility check had to be limited to the most important content.

In addition, precautions were taken to prevent individual pages of the questionnaire being inadvertently missed out. This was done by placing a marker on each page of the questionnaire that had to be set to “The entries on this page are complete” after the respondent had completed the page.

A **plausibility application** with around 180 plausibility rules (excluding the horticultural module) was used for the actual checking of the data sets sent. The specialist team first tested the functionality of the plausibility application using “fictitious” holdings. To this end, test data sets were created with specifically placed errors to check whether the program detected the incorrect entries and displayed them accordingly. A comprehensive search function (for error codes, holding numbers, regional breakdown, blank forms, etc.) simplified the workflow.

The following technical checks were performed:

- check for completeness
- minimum and maximum values
- horizontal checking of logical dependencies in a survey unit (e.g. in holdings belonging to natural persons, a holding operator needed to be present)
- comparisons with previous surveys
- comparison with the data from administrative sources and other statistical data.

With respect to the plausibility rules that were drawn up, a distinction was made between:

Information error points (around 100 information error points): These were primarily used to identify incorrect entries or spelling mistakes. Threshold values were incorporated into the program, particularly for specific items, for example to prevent entries for special crops being

made in the wrong units of measurement (e.g. m²). A message appeared if these predefined values were exceeded. The entries identified as an information error may represent true facts, however; in such cases, the team of experts had to decide whether to accept that the data was correct on the basis of research or their specialist knowledge, and to eliminate the error message using the appropriate persistence, or to make the necessary corrections if the entries proved to be incorrect.

Error points (around 80 error points): These error points had to be corrected by the members of staff either by questioning respondents or on the basis of their specialist knowledge.

The screenshot shows the 'Kulturarten' (Cultural Types) section of the software. It displays a table of agricultural land use types and their corresponding areas. The table is organized into two main sections: 'Dauerkulturen' (Permanent Crops) and 'Dauergrünland' (Permanent Pasture). The 'Dauerkulturen' section includes categories like 'Haus- und Nutzgärten', 'Intensivobstanlagen ohne Beerenobst', 'Intensiv-Beerenobst (ohne Erdbeeren)', 'Extensivobstanlagen ohne Beerenobst', 'Extensiv-Beerenobst (ohne Erdbeeren)', 'Weingärten', 'Rebschulen', 'Baumschulen', 'Forstbaumschulen', and 'Christbaumkulturen'. The 'Dauergrünland' section includes 'Einmähdige Wiesen', 'Mähweide/-wiesen mit zwei Nutzungen', 'Mähweide/-wiesen mit drei und mehr Nutzungen', 'Dauerweiden', 'Hutweiden', 'Almen', 'Bergmähder', 'Streuwiesen', and 'GLÖZ G-Flächen'. The total 'Landwirtschaftlich genutzte Fläche (Summe Pos. 2001 bis 2020)' is shown as 2052. Below the table, the 'FPNR - Fehler' section shows 53 errors, with a specific message: 'Die im Abschnitt "Biolandbau" bewirtschaftete Fläche darf nicht größer sein als die "landwirtschaftlich genutzte Fläche" im Abschnitt "Besitzverhältnisse".'

Figure 6: Plausibility application – list of errors

Furthermore, **automatic corrections** (around 50 automatic error points) were made after the various data sources had been merged. These involved errors (missing, incorrect and implausible entries) that are detected and automatically corrected by appropriately programmed predefined values. The output automatic correction files could be used to check whether the program had correctly performed the automatic corrections.

Approx. 75% of the holdings were flagged during the first plausibility check and required examination or further processing. These were frequently cases that contained only certain implausibilities or changes that needed to be checked (e.g. information errors; see above) but were not necessarily incorrect per se.

During the plausibility work, particular attention was paid to **large-scale holdings** in order to prevent area undercoverage. The data was “compared” with the most recent farm structure surveys (1999, 2003, 2005 and 2007) and holdings with large differences in area (200 ha difference in the case of holdings up to 1 000 ha or 20% difference in the case of holdings of more than 1 000 ha) were displayed. Many years of experience have shown that in this area, despite clear instructions in the explanations and in the questionnaire itself, data entered on cultivated area (especially Alpine pasture and wooded areas) is very often either incorrect or

missing, although this can be corrected after relevant research using the various data sources available (information from subsidy applications for the Alpine transhumance lists or *Almauftriebslisten*, Forestry Yearbook, etc.) or by contacting the respondents by phone.

The necessary corrections were made electronically in the application itself by trained Statistics Austria employees. The **correction application** was designed in such a way that in the case of certain characteristics (e.g. non-permitted entry, error in totals items), it was not possible to continue working in the application until the error had been rectified. After the data set had been corrected and saved, it was checked again and corrected if necessary. The procedure was repeated until the program no longer detected any incorrect or inconsistent data.

The **blank forms** received (see Table 3 for a list of reasons for blank forms) were also subjected to checking. If, for example, information from administrative data was available for the holding and the respondent should not therefore have submitted a blank form, the holding was contacted directly by phone. Blank forms were processed in close cooperation with Agricultural and Forestry Register employees since the information from the blank forms (abandonment of the holding, lease of land, etc.) was used to update the register.

Table 3: List of blank forms (final status)

Universe (units addressed)		209 222
Blank forms (final status)		35 905
	Holding no longer exists	5 971
	Holding does not meet the survey criteria	5 629
	Holding sold or leased	14 217
	Respondent refused to provide information	6
	Despite repeated attempts to contact the respondent, he/she did not take up the option of completing the survey via the municipality by 31 March 2011	114
	Holding operator deceased	197
	Addressee unknown	72
	Addressee moved to an unknown address	65
	Blank form on the basis of the automatic plausibility check	764
	Blank form on the basis of the plausibility check	8 870
Resulting holdings		173 317

Plausibility at macro level

After all the micro data (both primary data and the administrative data added) had been entered and subsequently checked, the data aggregates were analysed in a macro plausibility check. As part of these macro analyses, the results were compared in particular with the results of the 1999-2007 surveys, the general livestock census and extracts from various registers and administrative data (IACS, etc.) and checked, and any processing errors were corrected in the micro data.

2.2.4 Imputation (where responses are missing or data is incomplete)

Unit non-response

After the reminder phase had ended (including the administrative penalty procedures instituted by the district administrative authorities), the **response rate** for the 209 222 agricultural and forestry holdings surveyed was 99.6% (208 381). Accordingly, 841 units had ultimately refused to provide information. In 721 cases the holdings needed to be imputed with the most important basic information using data from previous surveys, register information and administrative data. Many years of experience have shown that in the agricultural and forestry sector, the use of historical structural data on a statistical unit generally leads to better imputation results than

other estimation or imputation methods. Since holding data from previous surveys is generally available in the Farm Structure Survey, micro data for these holdings can be compiled by updating the historical structure of the production bases, incorporating any up-to-date secondary data that may be available (as described above). The remaining 120 holdings that could not be surveyed – all very small holdings near to the minimum threshold for the survey (see 2.1.2) and without any information from administrative data – were deemed to be blank forms since it was assumed in all likelihood that these holdings had ceased their activities.

For more information about unit non-response, see point 3.2.1.3.

Item non-response

Item non-response means that individual items in the questionnaire were not answered. The design of the electronic questionnaire enabled non-responses to individual questions to be kept to a minimum, in contrast with previous surveys consisting of paper questionnaires. The electronic questionnaire contained a plausibility check relating to the persons surveyed, for example, which meant that a complete data set containing all characteristics always had to be specified for each person.

In addition, the plausibility rules were designed to reveal **incomplete data sets**. In the case of wooded areas, for example, the data was compared with previous surveys and when an item non-response was suspected, the holding was flagged with an information error that needed to be checked by employees. Incomplete data sets were completed using data – if it was available – from applications for the mineral oil tax refund. In the case of large forestry holdings, the Forestry Yearbook – which contains information about the wooded areas in Austria's largest woodland holdings – provided another option for adding missing data on wooded areas. If these sources proved insufficient, data from previous surveys was used. Where this was not possible, the municipalities, district chambers of agriculture or the farmers themselves had to be contacted.

The method or alternative information source used to replace missing characteristics in specific cases has to be decided on a case-by-case basis, drawing on the in-depth specialist expertise of competent staff. Their experience of the relevant holding size, form of holding or region to which the unit is to be assigned is of utmost importance. The methods used have the advantage that they are individually tailored to the relevant agricultural and forestry holdings, taking into account all the information available.

2.2.5 Compilation of the final data set, (other) models and statistical estimation techniques used

The authentic data is generated after merging the various sets of administrative data with the primary data from the Farm Structure Survey on an individual holding basis using the holding number and checking the data at micro and macro levels. For plausibility at macro level, the data aggregates are analysed or the data is compared with the results of previous surveys.

As soon as checked authentic data was available, the individual sets of data were aggregated and the publication tables subsequently produced.

2.2.6 Other quality assurance measures

e-Quest questionnaire

Experience gained from the 2005 and 2007 sample surveys and suggestions from respondents and municipal survey assistants enabled the electronic questionnaire to be revised accordingly and thus designed to be even more user-friendly (e.g. revision of certain questions, option to work offline, etc.).

Municipal training courses

Due to the redesign of the questionnaire and the new topic areas covered by the survey for the first time, training events were held for the municipalities in all district capitals and in Vienna. The training courses were run by Statistics Austria staff, with the events being designed to familiarise the survey assistants commissioned to carry out the Farm Structure Survey with the

execution of the survey, taking into account the stipulated deadlines. In addition, the trainers introduced the electronic questionnaire and explained how to use and complete it correctly.

Hotline

During the survey phase, Statistics Austria provided a free service hotline for respondents and survey assistants. Prior to the survey, the hotline agents were trained by an external trainer on how to deal with difficult callers in a professional manner. For quality assurance in terms of the survey content, a list of questions and answers based on the findings from previous surveys was drawn up and updated during the survey phase in parallel with the regular team meetings.

Plausibility checks

Internal working guidelines were also drawn up and corresponding instructions issued for the employees processing the Farm Structure Survey.

As part of the macro plausibility check and due to the lack of comparative data, the results for the new topic areas were discussed with a team of experts before the data was published.

2.3 Publication (accessibility)

2.3.1 Preliminary results

Key figures were published in the form of a press release on 10 October 2011 and made available on the Internet. At the same time, preliminary key figures that were relevant to the EU were sent to Eurostat.

2.3.2 Final results

The anonymised final individual data for the Farm Structure Survey had to be sent to Eurostat in the required data format by 31 March 2012, the relevant information on support measures for rural development by 30 June 2012 and the data on agricultural production methods by 31 December 2012.

In accordance with Section 12 of the Farm Structure Survey regulation [Federal Law Gazette II No. 122/2010](#) (available in German only), Statistics Austria had to send the Federal Minister for Agriculture, Forestry, Environment and Water Management the data on individual holdings obtained under Section 4 for inclusion in the Information System for Agricultural and Forestry Holdings (LFBIS).

The final results were presented nationally to the media at a press conference on 31 May 2012 and published in a summary report.

In addition, the results were available in a variety of possible combinations via the STATcube database. STATcube enabled the results to be accessed down to municipality level in some cases (subject to a subscription).

The results, including the Survey on Agricultural Production Methods, were released with detailed descriptions in a publication.

2.3.3 Publication media

The Farm Structure Survey data is published in the following publication media:

Internet

The results are presented in summary or time series tables on the Statistics Austria website. Furthermore, the results are available cartographically in interactive maps.

Summary report (available in German only)

In addition to the results (text and tables), the summary report includes terms and definitions as well as information about the legal basis and how the survey was conducted and processed. The publication is completed by textual analysis of the results in comparison with previous surveys, supplemented by comparative tables and charts. In accordance with the Federal

Statistics Act 2000, as amended by Federal Law Gazette I No. 136/2001, Federal Law Gazette I No. 71/2003, Federal Law Gazette I No. 92/2007 and Federal Law Gazette I No. 111/2010, Statistics Austria is obliged to make the main findings available for free on the Internet. The summary report is available free of charge on the Internet as a PDF file.

[Publication: Agrarstrukturerhebung 2010 – Gesamtergebnisse](#) [“Farm Structure Survey 2010 – overall results”, available in German only]

The results of the Farm Structure Survey were published in conjunction with the results of the Survey on Agricultural Production Methods in a comprehensive publication in May 2013, which contains the results in tabular form. The most important results are described and presented using text tables and graphics. In addition, the publication includes extensive meta information, such as a description of the methodology used and definitions of characteristics. A CD-ROM containing tables in Excel format is also included. The publication can be downloaded free of charge as a PDF file from the Statistics Austria website; the standard publication in printed form, including the CD-ROM, is available for a fee.

[STATcube database](#) (available in German only)

In the “Databases” section of the statistical database, the results are available free of charge in tabular form for interactive queries in a number of topic-based data cubes down to federal province level. Regional results (down to municipality level) can be accessed by purchasing a subscription. This publication medium replaces the predecessor version ISIS.

In addition, ready-made tables are available to download in the “Tables” section under the “Statistics” heading in the “Agriculture and forestry” topic.

[Statistische Nachrichten](#) (“Statistical News”, available in German only)

Statistical News examines various topics in the Farm Structure Survey in detail.

[Standard publication: Statistik der Landwirtschaft 2011](#) (“Agricultural Statistics 2011”, available in German only)

[Statistisches Jahrbuch Österreichs](#) (“Statistical Yearbook of Austria”, available in German only)

Published annually, the Statistical Yearbook is a comprehensive reference work providing information about all areas of official statistics (demography, population, the economy and social affairs). This publication, including a CD-ROM, can be obtained for a nominal charge to cover costs. The data is available on the Internet free of charge as a PDF file.

[Facts & Figures](#)

[Wirtschaftsatlas Österreich](#) (“Austrian Economic Atlas”, available in German only)

The Austrian Economic Atlas enables the user to gain a straightforward, rapid and clear overview of the structure of the Austrian economy as well as the European economic landscape. It also includes a small amount of data on agriculture and forestry.

[Ein Blick auf die Gemeinde](#) (“The municipality in figures”, available in German only)

This brochure, which compares the selected municipality with the political district or federal province in which it is located, includes selected key data from the Farm Structure Survey.

[Special evaluations](#)

If the results in the commercial publication media described are insufficiently detailed, individual special evaluations can be ordered for a fee.

The results are also published in the [Green Report](#) (available in German only) by the BMLFUW.

2.3.4 Treatment of confidential data

In accordance with the [Federal Statistics Act 2000](#), Section 19 paras 2 and 3, statistics must in principle be published such that the data does not allow any identified or identifiable data subject to be deduced unless the data subject has no legitimate interest in the data remaining confidential. If identification of data subjects is unavoidable, the data may only be published with the express prior written consent of the data subject.

Data is published and distributed in accordance with the Federal Statistics Act 2000, as amended by Federal Law Gazette I No. 136/2001, Federal Law Gazette I No. 71/2003, Federal Law Gazette I No. 92/2007, Federal Law Gazette I No. 111/2010 and the Data Protection Act 2000, Federal Law Gazette I No. 165/1999. This means that only anonymised data is distributed.

Under the Federal Act on the Information System for Agricultural and Forestry Holdings (LFBIS Act) Federal Law Gazette No. 448/1980, as amended by Federal Law Gazette No. 597/1981 and Federal Law Gazette No. 505/1994 Section 3 (1), data obtained in the course of surveys ordered by regulation of the Federal Minister for Agriculture and Forestry in accordance with the Federal Statistics Act must be forwarded to the Federal Minister for Agriculture and Forestry insofar as this was ordered in said regulation.

In accordance with EU regulations (EC) No 1166/2008 and (EC) No 1200/2009, anonymised individual data must be forwarded to Eurostat.

3. Quality

The key measure of quality here is essentially the quality of the register, which is a decisive factor for the universe, and the quality of the administrative data used. Successful field work is another important determinant of quality.

3.1 Relevance

Statistics are relevant if user requirements can be optimally met. The Farm Structure Survey data is used for the following national and international purposes:

- The Farm Structure Survey is one of the most important sources of statistical information about agriculture and forestry. The objective is to obtain up-to-date and realistic results about the structural conditions in Austrian agriculture and forestry and their comparability with results of other EU member states.
- This basic information for agricultural policy decision-makers (e.g. BMLFUW, provincial governments and representative associations), for economic analyses and forecasts, and for science is needed in order to examine the causes and background to structural change in this important sector of the economy and subsequently to draw specific conclusions for the future. This data provides an essential basis for making informed agricultural policy decisions at national and international level.
- The results are incorporated inter alia into harvest statistics and subsequently provide basic data for supply balance sheets and the Economic Accounts for Agriculture.
- The master data and data on holdings updated during the survey are used to update the Agricultural and Forestry Register.
- The data is used in further calculations in the environmental and energy sectors and provides basic data, for example, for the development of indicators or for the index of agreed minimum wages.
- The distribution plan of returning holdings drawn up by LBG Österreich GmbH Wirtschaftsprüfung & Steuerberatung is based on the results of the Farm Structure Survey. The company's analysis provides valuable information about the economic circumstances of agricultural and forestry holdings for the Green Report produced by the BMLFUW.
- The sampling plan of the logging survey (Logging Report [HEM]) conducted by the BMLFUW is also updated using the results of the Farm Structure Survey.

The Farm Structure Survey must be conducted in accordance with EU legal requirements. The list of characteristics is drawn up in Eurostat working groups in the presence of the DG Agriculture (DG Agri) and/or agreed in accordance with current needs (Common Agricultural Policy [CAP]). The list is amended at national level in the relevant working groups of the Advisory Committee in line with national requirements. Regular discussions/working group meetings with national experts and end users ensure that any new requirements are taken into

account provided that they do not conflict with legal necessities and restrictions. The EU legal basis is implemented by a national regulation of the Federal Minister for Agriculture, Forestry, Environment and Water Management.

The requirements of the main users can to a large extent be met. Their request for more detailed regional data was able to be fulfilled by the full survey, in contrast to the sample surveys. Any data deficits are due to the discrepancy between the regional and classificatory level of detail requested and data protection regulations.

3.2 Accuracy

Accuracy is the traditional measure of the quality of results of a statistical product. It is defined by the “error” – by how much the estimated value deviates in absolute terms – from the true value. This error is not determined by a single indicator; instead, it occurs as the sum of a wide variety of individual components, not all of which are linked.

A distinction is made between two main types of error:

3.2.1 Non-sampling effects

3.2.1.1 Quality of data sources used

Primary data

The characteristics collected as primary statistics during the Farm Structure Survey were subjected to a plausibility check at micro level and key characteristics were also compared with any available data (cf. also 2.2.3 Editing and verification of data sources used).

Secondary data

To avoid the same questions being asked twice and to minimise the burden on respondents, administrative data has been used for the farm structure surveys since 1997.

Article 4 (1) of Regulation (EC) No 1166/2008 regulated the use of the following administrative data for the Farm Structure Survey 2010:

- Integrated Administration and Control System (IACS), including the Austrian programme for the promotion of environmentally friendly and extensive agriculture that protects natural habitats (ÖPUL)
- system for identifying and registering cattle (Cattle Database [CDB])
- organically farmed holdings: relevant information from the IACS/ÖPUL system was forwarded to Statistics Austria by the BMLFUW
- rural development measures.

Based on Article 4 (2) of the above-mentioned regulation, Austria also applied to use the following sources as additional instruments for the use of administrative data:

- veterinary information system (VIS)
- mineral oil tax refund (MÖST).

To this end, a description of the methods used and information about the quality of the data sources had to be submitted to Eurostat.

For publication of the national results, the following sources were also used in order to provide a specific breakdown of the results:

- Land Register for Mountain Farms: Data on the points in the Land Register for Mountain Farms that are used to divide mountain farm holdings into groups in the land register was collected by AMA in the course of the multiple area applications and made available by the BMLFUW.
- Less favoured areas: The definition of less favoured areas was submitted by the BMLFUW.

When administrative data is used, the European Commission assumes that it is of at least the same quality as that from statistical surveys.

To this end, Statistics Austria examined the administrative data in 1995 by comparing results from various sources in order to determine their level of congruity. The cultivated area data, for example, was recorded both in the Farm Structure Survey and in subsidy applications in IACS.

It can be assumed that the quality of the administrative data is generally good due to the control mechanisms and sanctioning in the agricultural subsidy system.

The inconsistencies that occasionally occur when administrative data is merged with the primary data collected on an individual holding basis is attributable to the different objectives pursued by funding and statistical bodies.

The problems were primarily a result of:

- the merging or separation of holding units in funding systems;
- the different handling of Alpine associations (*Almgemeinschaften*)
- different definitions used by funding and statistical bodies.

To enable data sets from the different sources to be merged correctly, discrepancies had to be “corrected” by research, contacting respondents or in discussions with experts.

3.2.1.2 Coverage (misclassifications, undercoverage / overcoverage)

Basic errors are directly linked to the timeliness and quality of the Agricultural and Forestry Register maintained by Statistics Austria.

The quality of the register is determined by the availability of information. This information is provided partly by statistical surveys and also from administrative data sources, which are used for updating purposes. The increased use of administrative data (e.g. AMA, social insurance data, etc.) has enabled the quality of the register to be significantly improved, especially as there may be a considerable time gap between the various statistical surveys, which means that not all register data can be updated each year. Differing requirements in terms of statistical and administrative data often require a not inconsiderable amount of effort when the data is compared, however.

The likelihood of **undercoverage** of agricultural holdings is extremely low, since newly established holdings generally submit subsidy applications and are therefore incorporated in the Agricultural and Forestry Register as a result of the transfer of administrative data. The number of small agricultural holdings that for a variety of reasons do not apply for subsidies is decreasing significantly.

In general, the main problems that can occur when administrative data is transferred or used are as follows:

- use of different units or descriptions and associated difficulties in identifying identical or related units
- differences in definitions (characteristics)
- different attributes of statistical characteristics and administrative data
- information from administrative sources is not always up to date.

With respect to the undercoverage of woodland holdings, a slight improvement in the situation can be detected since the relevant information on wooded areas began to be predefined in the personalised questionnaires during the Farm Structure Survey using data from the mineral oil tax refund. In particular, the survey assistants in the municipalities and the hotline agents were trained to take the utmost care when recording wooded areas.

Nevertheless, it should be noted in this context that full information about all woodland operators in Austria is not currently available (from administrative data). Information about new woodland operators is frequently lost due to forestry and agriculture being handled differently or separately (e.g. in the event of the transfer of holdings, the disposal of land or the sale of woodland) and is now sparse. Table 4 clearly shows the differences between the wooded areas

reported (in ha) depending on the source (Farm Structure Survey, Forest Inventory or cadastral area). It should be noted here that:

- smaller woodland operators who do not meet other survey criteria are not included due to the minimum survey threshold of 3 ha (for pure forestry holdings) in the Farm Structure Survey
- the Farm Structure Survey and the Forest Inventory use completely different methodologies.

Table 4: Wooded areas – comparison of the different sources (area in hectares)

Farm Structure Survey		Forest Inventory 2007/2009			Cadastral area 2008 acc. to Fed. Office of Surveying and Metrology
2010	1999	with yield	without yield	total	
3 403 142	3 256 645	3 398 000	593 000	3 991 000	3 634 278

Since only one form can be submitted for each holding number, overrecording cannot occur.

3.2.1.3 Missing responses (unit non-response, item non-response)

Unit non-response

In order to minimise missing responses due to questionnaires not being returned, the municipalities were locally involved in the implementation of the survey since they are familiar with local conditions and are for the most part very knowledgeable about the agricultural holdings in their catchment area. The municipalities had to ensure that all questionnaires were returned by asking the farmers to fill out the forms verbally, by phone or in writing. Statistics Austria contacted some of the survey assistants and respondents directly (by phone or e-mail) to remind them about the outstanding questionnaires.

The missing responses and delayed receipt of responses were due to the **following reasons**:

- **Contactability:** Respondents could not be contacted either by phone or in person, or only visited the municipal office to provide information after several requests to do so.
- **Refusal to provide information:** Respondents needed to be persuaded of the necessity of providing information (explanation about who needs this data and for what purpose and that not all data is already available in the form of administrative data). Each holding operator who refused to provide information despite being requested to do so and informed by registered letter about the legal consequences was ultimately reported to the competent administrative authorities by Statistics Austria in July 2011 for the initiation of an administrative penalty procedure. Since Statistics Austria has no coercive powers for implementing administrative penalty procedures, it had to report these holdings to the competent administrative district authorities, which are responsible for prosecution proceedings in Austria. In most cases, a financial penalty was imposed and a deadline was also set for the respondent to provide the required data; in other words, paying the financial penalty did not release the farmers from their obligation to provide information – they needed to submit the data in any event. With a few exceptions (0.4% of the holdings surveyed), the farmers accepted these consequences and duly – if belatedly – submitted their data to Statistics Austria.
- **Delays** after respondents had declared that they would complete the questionnaire themselves but had failed to do so: A number of farmers stated that they would fill out the questionnaire themselves, but either did not do so or only did so after repeated reminders.

Between April and June 2011, a **letter of formal notice was sent by registered post** (with confirmation of receipt) to some 5 400 holdings that had not correctly returned their form or had not done so in due time. A number of municipalities and holdings asked for the deadline to

return the form to be extended for a wide variety of reasons. Some of these holdings were interviewed by phone by Statistics Austria staff in order for their data to be recorded.

After the reminder phase had ended (including the administrative penalty procedures instituted by the district administrative authorities), the response rate for the 209 222 agricultural and forestry holdings surveyed was 99.6% (208 381), including blank forms. Accordingly, 841 units had ultimately refused to provide information. In 721 cases the holdings were able to be imputed using data from previous surveys, register information and administrative data (see point 2.2.4). The remaining 120 holdings that could not be surveyed – all very small holdings near to the minimum threshold for the survey (see 2.1.2) and without any information from administrative data – were considered to have returned blank forms since it was assumed in all likelihood that these holdings had ceased their activities.

Item non-response

The electronic questionnaire was designed such that it could not be sent until all the fields marked as mandatory had been correctly filled out. In addition, various plausibility checks were integrated into the electronic questionnaire; these indicated fields that needed to be filled in or stipulated that a particular entry needed to be made where there were dependencies on other characteristics. This minimised the likelihood of individual questions not being answered. Questionnaires in previous surveys, which were still conducted in paper form, were often returned incomplete.

Moreover, precautions were taken in the electronic questionnaire to prevent individual pages of the questionnaire being inadvertently missed out. This was done by placing a marker on each page of the questionnaire that had to be set to “The entries on this page are complete” after the respondent had completed the page.

Since the questionnaire was extensive, an overview page was designed to show the processing status of the individual pages. Respondents could go directly to the pages still to be completed from this overview.

Incomplete data sets (where data on wooded areas was missing, for example) were completed using data – where available – from applications for the mineral oil tax refund. The Forestry Yearbook, which contains information about the wooded areas in Austria’s largest woodland holdings, provided another option for adding missing data on wooded areas. If these sources proved insufficient, data from previous surveys was used. Where this was not possible, the municipalities, district chambers of agriculture or the farmers themselves had to be contacted. The imputation method or source used in specific cases has to be decided on a case-by-case basis. The choice is at the discretion of the competent member of staff, based on his or her experience of the relevant holding size, form of holding or region to which the unit is to be assigned. The methods used have the advantage that they are individually tailored to the relevant agricultural and forestry holdings, taking into account all the information available.

3.2.1.4 Measurement errors (entry errors)

Measurement errors were negligible and may have been caused by a misleading use of definitions or units in the survey tools, such as data on cultivated area being entered incorrectly due to the incorrect conversion of units of area (ha, are and m²). Specific checks using data from previous surveys and/or minimum-maximum values in the plausibility application were used in an attempt to detect and minimise these kinds of error as effectively as possible. The specialist knowledge and experience of the competent member of staff plays a key role in the detection and correction of measurement and entry errors.

3.2.1.5 Processing errors

When primary and secondary data was merged – based on the holding number – a few holdings could not be automatically assigned to each other initially. Relevant research enabled all discrepancies to be corrected and the data to be merged successfully.

Processing errors in the strict sense were minimised by the appropriate design of the plausibility application (direct option to check the changes made by staff). Any imputation errors that occurred if missing data cells were filled using a subjectively plausible value that turned out to be obviously incorrect during plausibility checks of the micro/macro data were checked again during the plausibility check and corrected if necessary.

3.2.1.6 Model assumption affects

None known.

3.3 Timeliness and punctuality

Selecting tools for obtaining data, determining deadlines for returning the questionnaire and complying with a detailed schedule are all key factors in the timeliness and punctuality of the data. These aspects need to be defined since they enable a target/actual comparison to be carried out. In this respect, both the time when data is needed nationally and the deadline for its submission to Eurostat must be taken into account.

Generally speaking, all the publication and transmission deadlines for the Farm Structure Survey were able to be met as a rule. The fixed delivery dates to Eurostat (31 March, 30 June and 31 December 2012), which were independent of the deadlines, were therefore able to be complied with. This was despite the fact that the deadline selected in Austria (31 October 2010), and thus the required survey period (31 October 2010 to 31 March 2011), was very late compared to other European countries for reasons of administrative data use and to reduce the burden on respondents.

Preliminary key figures were published in the form of a press release on 10 October 2011. At the same time, preliminary key figures that were relevant to the EU were sent to Eurostat.

The final results were presented nationally to the media at a press conference on 31 May 2012 and published in a summary report.

3.4 Comparability

3.4.1 Comparability over time

For comparative reasons the spreadsheet program used in the Farm Structure Survey 2010 was largely the same as that used in 1999, with new questions being taken into account.

When looking at comparability over time, it should generally be noted that modifications to the **minimum thresholds for the survey** (see 2.1.2) have been necessary over the years as a result of changing requirements and structural changes in agriculture and forestry. Thus, during the last modification in 1999, the main results of the Farm Structure Survey 1995 were recalculated in line with the amended criteria in order to ensure the comparability of the two surveys.

A further milestone was **accession to the EU**, which entailed adjustments and changes to a number of definitions as a result of the relevant EU legal basis (e.g. pensioners who helped out on agricultural and forestry holdings were also to be included as workers).

In contrast to previous surveys, the following changes must be specifically observed. Detailed descriptions of the individual topics are included in the publication [Agrarstrukturerhebung 2010 – Gesamtergebnisse](#) (“Farm Structure Survey 2010 – overall results”, available in German only).

Definition of holding

Agricultural holdings were defined as an enterprise at the level of the main holding for the first time in the Farm Structure Survey 2010 and included all the production units (permanent establishments or sub-holdings) that were part of the main holding. Seven per cent of holdings had two or more sub-holdings (in many cases, these are Alpine pasture units). In comparison with the last full survey in 1999, this change did not have any serious effects since the issue of sub-holdings had not yet arisen to any significant extent. In the 1999 survey, the cultivated area

of the holding had to be specified as a whole and not divided between any permanent establishments.

- **Regional assignment of holdings**

In accordance with the business principle, the cultivated area of a holding had previously been assigned to the municipality/federal province in which the headquarters of the holding was situated.

In the course of the Farm Structure Survey 2010 and in accordance with Eurostat's requirements, holdings were assigned geographically as far as possible according to their actual location if the relevant information was available. This was generally done using the permanent establishment of the main holding or – in its absence – an addressable object (e.g. in the case of agricultural communities, Alpine pasture or woodland holdings) using the location of the most important parcel.

Nevertheless, regional results may be distorted as a result of changes in location due to holdings being merged (e.g. if several large forestry administrations have been combined to form one holding unit) or land being leased if the land affected is assigned to another administrative unit as a result of the change. This aspect is becoming increasingly important due to the increasing size of holdings as a result of additional land being bought or leased as well as individual parts of a holding being combined to form one overall holding.

- **Types of activity**

Until 1999, partnerships were assigned to the "holdings of legal persons" heading. They have been reported separately since 2003.

- **Land Register for Mountain Farms**

In 2001 the classification system for mountain farm holdings was changed to the Land Register for Mountain Farms, which provides a more accurate assessment of the natural and economic difficulties faced by holdings than the disadvantaged zones. The new evaluation method can be compared to only a limited extent with the disadvantaged zones, which were used until 1999.

- **Cultivated area**

In the case of cultivated area, changes in both definition and assignment must be noted:

- The most significant change occurred as a result of modified recording conditions in the funding applications for Alpine pasture and subsequently for utilised agricultural area. Under current regulations, forage areas must be precisely separated from other Alpine pasture (essentially woodland and uncultivated land).
- In the permanent pasture area, terms were harmonised with those used in the subsidy system. The assignment to "intensive" and "extensive" grassland also needed to be adapted.
- Energy grasses were assigned to arable land from 2007; these cultivated areas had previously been integrated in the "wooded areas for energy production" item and subsequently in area used for forestry.
- Christmas tree crops had to be assigned to permanent crops and thus to utilised agricultural area from 2010; in previous surveys, Christmas tree crops were still assigned to area used for forestry.

- **Secondary activities**

Changes had to be made to the recording of data on the basis of the EU legislation applicable to the Farm Structure Survey 2010:

- Forestry was included as a secondary activity for the first time in 2010.
- In the case of "processing and sale of agricultural products", wine production from the vineyard's own grapes was not classed as a secondary activity from 2010 since it was classified as part of agricultural work.

- **Forms of holding and standard output**

The previous classification by forms of holding was based on standard gross margins

(SGM). Changes in funding policy (holding-related rather than product-related subsidies) necessitated a change to the holding classification system, which is now based on the distribution of the standard output (SO) of a holding. Standard output describes the market performance of the entire agricultural and forestry holding. The new classification system is essentially based on European Union requirements, although the national system needed to be extended in order to adapt it to Austrian conditions (e.g. inclusion of forestry). Comparison with previous forms of holding is not possible.

3.4.2 Comparability over region

Regulation (EC) No 1200/2009 implementing Regulation (EC) No 1166/2008 on farm structure surveys and the survey on agricultural production methods precisely prescribes the definitions of the characteristics to be surveyed in the individual member states. In addition, a **handbook** (Handbook on implementing the FSS and SAPM definitions) containing detailed explanations of the definitions of the characteristics was produced by Eurostat within the working group and revised where necessary. This ensures that the highest possible degree of comparability is achieved at European level for data from the Farm Structure Survey (FSS) and the Survey on Agricultural Production Methods (SAPM).

Exception:

- When **organically farmed land** was compared at European level, there were discrepancies between member states in the interpretation of the relevant definition in the regulation, the explanations in the handbook and the validation rules. According to the regulations, the extensive grassland areas (essentially Alpine pasture) should not be classed as organically farmed grassland area. As a result of the formulation that organically farmed utilised agricultural area (“...The utilised agricultural area ... is broken down by the crops listed in the Regulation...”) should be broken down into specific listed sub-areas in which the extensive grassland does not occur or is even resolutely excluded, a number of member states – including Austria – have in turn not included extensive grassland in organically farmed utilised agricultural area either. Moreover, this is set out in the validation rules by Eurostat (version 7). This does not appear to make sense from a statistical point of view and should therefore be discussed further in the working group. A correction to the cultivated area data in the data files should be considered.
- When comparing national and EU results, it should also be noted that the **survey criteria differ**. While only holdings with utilised agricultural area are of interest in the European Union, holdings with areas used for forestry are also taken into account in Austria due to the economic importance of forests and woods.

There is full regional comparability of the federal provinces. At political district level, any consolidation of districts should be taken into account.

3.5 Coherence

Data on individual topics in the Farm Structure Survey is also reported in various other statistical surveys (e.g. Livestock Survey, Crops on arable land, Basic Survey of Areas under Vine, Labour Force Survey, etc.). However, the various results can be compared to only a limited extent due to differing objectives, definitions, etc.

Coherence with AMA data/IACS data:

A large amount of administrative data is recorded by Agrarmarkt Austria (AMA) when multiple applications are evaluated during the processing of subsidies. However, this data only ever relates to the criteria on which the subsidy requirements are based or to those holdings that have made a relevant application for subsidies. Any deviations from the IACS data can therefore be explained by differing definitions or by the fact that not all holdings apply for subsidies. For example, the IACS data is based on 132 653 subsidy applications and on holdings (11.7% fewer than the number of agricultural holdings in the FSS 2010) with a total

utilised agricultural area of 2 760 257 ha (4.1% less than in the FSS 2010) and 1 362 411 ha of arable land (0.6% less than in the FSS 2010). At holding level, this data is to some extent comparable and is therefore also included in the surveys as administrative data or is at least used for plausibility checks.

Coherence with cadastral areas:

When data related to cultivated area is evaluated, it should be noted that the area in the Farm Structure Survey must always be seen in connection with agricultural and forestry holdings (headquarters of the main holding) and cannot therefore be compared, for example, with the area reported according to the land register or the cultivated area according to the location principle.

Coherence with the Basic Survey of Areas under Vine:

According to the definition of the Basic Survey of Areas under Vine 2009 (without a minimum cultivated area threshold), 20 181 holdings were recorded with a planted vineyard area of 45 585.81 ha. With a minimum survey threshold for pure vineyard holdings of 0.25 ha of vineyard area, the Farm Structure Survey 2010 reported only 14 401 holdings; however, these had a vineyard area of 46 635 ha, which also included temporarily set-aside or cleared vineyard areas.

Coherence with the Grain Harvest Survey/field crop production:

There are no significant deviations here.

Coherence with livestock data:

The minimal differences from the livestock data recorded in the livestock census or veterinary information system are attributable to differing reference dates or survey thresholds.

Coherence with business statistics:

According to the relevant legal basis, the production potential in agriculture and forestry, including cultivated areas, livestock numbers, the labour input in agriculture and forestry and other holding-specific characteristics, should be surveyed in the Farm Structure Survey for units that reach certain thresholds in terms of the size of cultivated area or livestock numbers. It is irrelevant here whether agriculture and forestry is undertaken as a main or secondary activity by these units. In the Farm Structure Survey only the agricultural and forestry part – and the associated characteristics – are taken into account; holdings are not classified by their main area of activity as is the case, for instance, in business statistics.

Coherence with the Labour Force Survey:

In the Labour Force Survey the focus is on employed persons, whereas in the Farm Structure Survey the labour force data collected is designed to measure the actual labour input in agriculture and forestry. In other words, the Farm Structure Survey also includes family members who provide only a few hours of assistance, regardless of their major occupation, as well as retired persons. Comparison of the labour force results in the Farm Structure Survey 2010 with the general Labour Force Survey is therefore of only limited use due to fundamental methodological differences.

Coherence with accommodation statistics (stock):

The capacities at farms that are reported in accommodation statistics closely match the data on tourist beds determined during the Farm Structure Survey 2010. As a full survey, the Farm Structure Survey 2010 reports slightly higher stock figures than accommodation statistics, which were designed as a concentrated sample and do not include all Austrian municipalities (1 600).

4. Outlook

Production-related aspects

Since the 2005 sample survey, only electronic questionnaires have been used for farm structure surveys. However, the sole use of electronic questionnaires made it necessary to offer a “reporting alternative” to respondents unable to meet their obligation independently. To date, they have been able to return their forms to Statistics Austria with the assistance of the municipalities.

In recent years, there have been repeated discussions between the BMLFUW and the Association of Municipalities (and subsequently also with the Federal Chancellery and the Federal Ministry of Finance) about the amount of remuneration that municipalities should receive and, in the run-up to the Farm Structure Survey 2010, the municipalities were assured by the BMLFUW that this would be the last survey in which they would have to participate. Since the municipalities will no longer provide on-the-spot assistance, another survey alternative to direct reporting must be offered. For the 2013 sample survey, a telephone survey will be offered to respondents who are unable to independently fulfil their reporting obligations electronically.

Content-related aspects

At European level, the guidelines for structural surveys after 2013 are still being finalised. Amendments to the list of characteristics for the Farm Structure Survey 2016 are currently being discussed. Subsequently, an agricultural census is being planned for 2020 and sample surveys for 2023 and 2026. To meet the increasing need of agricultural policy for information while at the same time taking into account the burden on respondents, Eurostat is pursuing the strategy of planning a core of (established) characteristics for the surveys, which is designed to be supplemented by module surveys with specified characteristics. To reduce the burden on respondents, it is planned to conduct these module surveys less frequently and/or as sub-samples. In addition, flexible satellite surveys will be conducted on specific current issues. The option of satellite surveys enables the list of questions to be flexibly adapted (via comitology) to potential topics that may arise from the future CAP or due to future issues.

Publication-related aspects

The focus of further development work will be on the conceptual implementation of a homogeneous range of publications consisting of synergy-based and coherent data cubes provided in the STATcube statistical database. These data cubes will, as comprehensively as possible, provide users with data on all characteristics and attributes in accordance with principles of making data available free of charge or for a fee.

Glossary

AMA

Agrarmarkt Austria is a legal person under public law whose responsibilities include the processing of subsidy administration.

DG Agri

The European Commission’s Directorate-General for Agriculture and Rural Development is responsible for agricultural and rural development policy. It handles all aspects of the Common Agricultural Policy (CAP), including market measures, rural development policy, financial matters and international issues relating to agriculture.

GLÖZ A / GLÖZ G

Land taken out of production (A = arable land; G = permanent pasture) that complies with the minimum requirements for good agricultural and environmental condition. Land on which the minimum annual maintenance measures (e.g. chopping) are carried out to prevent the formation of woodland, scrub and

degradation and on which the crops are not used annually for harvesting or grazing. These terms are used in the land use list for multiple area applications.

IACS

The Integrated **A**dministration and **C**ontrol **S**ystem forms the EU legal basis that regulates the processing of subsidies. All regulations governing land-related and animal-related aid are included in this system. In addition to provisions for the filing of applications and amendment options, it also contains the procedures for IT checks, on-the-spot inspections and sanctions.

Land Register for Mountain Farms (BHK)

First used in 2001, the Land Register for Mountain Farms provides a more precise evaluation of the natural and economic difficulties faced by individual mountain farm holdings in comparison with the previous division of mountain farm holdings into four disadvantaged zones (1974 to 2000). The holdings are evaluated by Agrarmarkt Austria (AMA) during the annual multiple area applications on the basis of BMLFUW guidelines using difficulty criteria grouped into three main categories: internal infrastructure, external infrastructure, and climate and soil conditions. Each individual criterion is evaluated in a standardised manner according to a nationally developed scheme (theoretical maximum number of points: 570 BHK points). The total number of points for the individual criteria gives the BHK points figure for a holding.

The previous disadvantaged zones and the BHK groups of points cannot be compared directly since in the assessment of disadvantage used at the time (up to 2000), only the “gradient” criterion was assessed – and only according to a threshold (smaller and greater than 25% gradient) – whereas a large number of criteria are evaluated in the BHK and collated in the BHK points figure for the holding.

The BHK groups are as follows:

BHK group 1: up to 90 BHK points

BHK group 2: 91 to 180 BHK points

BHK group 3: 181 to 270 BHK points

BHK group 4: over 270 BHK points

Livestock unit (LU)

The livestock unit is a common unit that enables livestock to be expressed in a single figure and various categories of livestock to be grouped together for comparison purposes. Figures for the individual livestock categories are converted into LU. A conversion formula is specified for each livestock category, according to age groups and forms of use.

Multiple application

The multiple area application, which consists of a number of sections (general application form, cultivated areas, list of animals, etc.), is used by the applicant to apply to the competent district chamber of agriculture for funding.

NACE

NACE is the acronym (*Nomenclature générale des activités économiques dans les Communautés Européennes*) used to designate the various statistical classifications of economic activities developed since 1970 in the European Union. NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment, National Accounts) and in other statistical domains. Statistics produced on the basis of NACE are comparable at European and, in general, at world level. The use of NACE is mandatory within the European statistical system.

NUTS

NUTS is an abbreviation of *Nomenclature des unités territoriales statistiques*. This is a system of hierarchically organised territorial units for statistical purposes that was established many years ago by Eurostat in collaboration with the member states and whose use is mandatory under Regulation (EC) No 1059/2003 of 26 May 2003 (latest version: No 31/2011 of 17 January 2011). It divides the territory of the EU into territorial units on three levels, which generally consist of entire administrative units or groupings of such units:

NUTS 1 Regions of the European Communities

NUTS 2 Basic administrative units

NUTS 3 Subdivisions of the basic administrative units.

For Austria, the subdivision was as follows:

- **NUTS 0** corresponds to the member state.
- **NUTS 1** is divided into three units: EASTERN AUSTRIA (Burgenland, Lower Austria, Vienna), SOUTHERN AUSTRIA (Carinthia, Styria) and WESTERN AUSTRIA (Upper Austria, Salzburg, Tyrol, Vorarlberg).
- **NUTS 2** is represented by the federal provinces.
- **NUTS 3** consists of 35 units and is formed by merging several municipalities. Each municipality is assigned to precisely one NUTS unit. Vienna forms its own NUTS 3 unit.

Standard output

Standardised figure describing the average monetary value (in euros) of the gross agricultural production of an agricultural holding. It is used in official statistics to classify agricultural holdings by type of farming. Standard output is determined as gross monetary output per unit of area of a crop type or per animal unit of a livestock category by multiplying the quantity produced by the associated farm-gate price. Average yields and prices are used, which are calculated for a reference period of five marketing years. The total standard output of each holding describes the market performance of the entire agricultural holding. The standard output coefficients are calculated by multiplying production per unit/characteristic by the relevant farm-gate price for the region. VAT, taxes on products and direct payments are not included.

These standard output coefficients are determined by the Federal Institute of Agricultural Economics in line with European Union requirements and submitted to Statistics Austria for calculation of the total standard output of each agricultural and forestry holding. Multiplying the standard output coefficient by the livestock numbers and areas under cultivation determined in the Farm Structure Survey gives the total standard output of the holding, which is used to characterise its economic size.

Output is the sum of the value of the principle product(s) and of the secondary product(s).

Veterinary information system

On behalf of the Federal Ministry of Health, Statistics Austria operates the veterinary information system (VIS) as part of the consumer health information system. The focus is on livestock holdings, data on animal movements, and the official monitoring and control of animal diseases. Based on the central pig database (ZSDB) and the register of Austrian sheep and goat holdings, the veterinary information system (VIS) was expanded to include holdings that keep other livestock categories.

List of abbreviations

AGES	Agency for Health and Food Safety
AMA	Agrarmarkt Austria (for definition, see Glossary)
AWI	Federal Institute of Agricultural Economics
BGBl.	Federal Law Gazette
BHK	Land Register for Mountain Farms (for definition, see Glossary)
BMLFUW	Federal Ministry of Agriculture, Forestry, Environment and Water Management (also known as the Ministry of Life)
CAP	Common Agricultural Policy of the European Union
CDB	Cattle Database
DG Agri	European Commission's Directorate-General for Agriculture and Rural Development (for definition, see Glossary)
EAA	Economic Accounts for Agriculture
EU	European Union

Eurostat	Statistical Office of the European Communities
FSS	Farm Structure Survey
GLÖZ A / GLÖZ G	Arable and grassland areas that should be maintained in a good agricultural and environmental condition and that are no longer used for production (for definition, see Glossary)
HEM	Logging Report
IACS	I ntegrated A dministration and C ontrol S ystem (for definition, see Glossary)
LAU	Local administrative unit (LAU 2 corresponds to municipalities)
LBG	LBG Österreich GmbH Wirtschaftsprüfung & Steuerberatung manages the network of returning holdings.
LFBIS	The Information System for Agricultural and Forestry Holdings enables the federal government to consolidate data on individual holdings (data from holdings statistics and agricultural funding). The LFBIS master file is maintained by Statistics Austria, while the LFRZ is responsible for technical support.
LFR	Agricultural and Forestry Register
LFRZ	The Computing and Technology Centre for Agriculture, Forestry and Water manages a variety of databases, including the LFBIS. The LFRZ is also responsible for the data collected by AMA in the course of subsidy administration.
LKÖ	Austrian Chamber of Agriculture
LU	Livestock unit (for definition, see Glossary)
MFA	Multiple area application (for definition, see Glossary)
MÖST	Mineral oil tax refund (for agricultural diesel)
NA	National Accounts
NACE	N omenclature générale des a ctivités économiques dans les C ommunautés Européennes (for definition, see Glossary)
NUTS	N omenclature des U nités T erritoriales S tatistiques (for definition, see Glossary)
ÖPUL	The Austrian programme for the promotion of environmentally friendly and extensive agriculture that protects natural habitats is a national programme implementing agri-environmental rural development measures.
SAPM	S urvey on A gricultural P roduction M ethods
SGM	The standard gross margin has been replaced as an economic criterion by standard output.
SO	Standard output (for definition, see Glossary)
STAT	Statistics Austria (Federal Institute)
STATcube	Statistics Austria's statistical database system is the successor to the ISIS database.
TSO	Total standard output of the holding
VIS	Veterinary information system (for description, see Glossary)
WIFO	Austrian Institute of Economic Research

Reference to supplementary documentation/publications

A detailed methodology report had to be submitted to Eurostat once the Farm Structure Survey had been completed.

Annex

Links to the following sub-documents (all in German) are provided in this standard documentation:

[Handbook for municipalities](#)

[e-Quest questionnaire](#) (screenshots)

[Accompanying letter](#)

[Cover letter from the Austrian Chamber of Agriculture](#)

[Survey folder](#)

[Instructions on how to fill in the questionnaire](#) (for farmers)

[Survey criteria](#) (download)

[Explanations regarding the content](#) (download)

[Survey characteristics](#)