FARM STRUCTURE SURVEY 1999/2000

NATIONAL METHODOLOGICAL REPORT

Member State: AUSTRIA

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SUMMARY

In Austria, the Farm Structure Survey was conducted in 1999. The legal basis was Council Regulation (EEC) No 571/88, amended by Council Regulation (EC) No 2467/96. At national level, Austria's Federal Minister for Agriculture and Forestry adopted a Regulation (*BGBl.* No 251/19988) on the basis of the 1965 Federal Statistics Act (*BGBl.* No 91/1965).

All data, except for livestock figures - which were taken from the General Livestock Census conducted in December of the same year - were to be collected as at the reference date of 1 June. Since Austria was permitted to use administrative data, data on arable areas needed to be collected only from the 7 700 or so farms that had not applied to *Agrarmarkt Austria (AMA)* for aid in 1999.

For the sake of rationalisation, machine-readable documents (OCR) were used instead of the traditional forms. A pilot survey was carried out a year before the survey proper in order to find out whether people could understand the new forms. The findings of this pilot report were incorporated into the methodology.

Under the legislation in force in Austria, the local authorities are responsible for conducting the Farm Structure Survey *in situ* - i.e. they have the task of collecting data from respondents via survey bodies. Immediately before the reference date, the survey bodies received instruction from staff of Statistics Austria. The local authorities were paid a fee for their work.

The documents needed for the survey were sent to the local authorities. The plan was that farmers would be consulted on the farms themselves or at local authority's offices. The survey ran from 1 June to 30 June 1999, after which the completed forms had to be returned via the competent district administration [*Bezirkshauptmannschaft*] to Statistics Austria.

In August 1999, the requisite administrative data for individual farms were evaluated from the IACS database, in accordance with Statistics Austria's instructions, by the Computer Centre for Agriculture, Forestry and Water Management [*Land-, Forst- und Wasserwirtschaftliches Rechenzentrum*], and submitted to Statistics Austria. The data-processing department prepared these data for further processing.

Livestock data were collected for the reference date of 1 December 1999. This survey was also conducted by the local authorities via survey bodies, and in this case too the local authorities were sent the requisite documents in advance by the printers. Farmers were to be consulted on the farms themselves. The survey ran from 1 December to 7 December 1999, after which the completed forms had to be returned via the competent district administration to Statistics Austria.

Processing of the forms received at Statistics Austria began with checking the response against a list of recipients and farmers were requested by telephone to submit any questionnaires that were missing. Around 600 refused to provide the requisite data on their farms. These were reported to the competent district administration with a view to administrative proceedings, after which around 90% of them submitted the data somewhat belatedly.

After the data had been read in, it was checked for completeness and plausibility using an extensive plausibility program that distinguished between three types of error:

1) Automatic error: the system was programmed to correct such errors automatically;
2) Information error: these were checked by the processing staff, who either confirmed that the data were correct or made appropriate corrections;
3) Error items: eliminated by staff.

Checks and/or corrections had to be made for around 35% of farms.

Since data had been taken from a variety of sources (Farm Structure Survey, General Livestock Survey, administrative data), the individual data sets needed to be combined. This was done on the basis of the common farm number. It was not initially possible to link around 7 000 farms to the IACS database because of either differing farm numbers or missing or contradictory information. These inconsistencies had to be rectified by means of laborious investigations or consultation of the respondents so that the data could be further processed properly. Around 2 000 farms failed to provide data for the Farm Structure Survey, even though they had made corresponding declarations in connection with the General Livestock Census or in connection with applications for aid. Data from the 1995 Farm Structure Survey were available for 1 700 farms, so the missing data could be imputed. For the remainder, the information for the Farm Structure Survey had to be collected at a later date.

On completion of the processing and after final adjustment of the data sets and checking of all the data, it was possible to draw up and publish the figures in tabular form.

1. INTRODUCTION

1.1. Background, aims

The European Union had stipulated that a Farm Structure Survey should be carried out by the Member States in either 1999 or 2000. In Austria, it was conducted in 1999 with 1 June as the reference date. As stipulated in the EU legislation, this was a full survey.

Austria conducted its first survey of all agricultural and forestry holdings as long ago as in 1902. Subsequent farm surveys were held in 1930, 1939 and 1951, and every ten years from 1960 to 1990. These were interspersed with land-use surveys, conducted every three to four years, and, as from 1973, labour-force surveys. Surveys of machinery and equipment were also carried out separately at six-year interval. The first farm structure survey based on a random sample was conducted in 1993, but the questionnaire was still largely based on that of the 1990 agricultural census for the sake of comparability in the continuation of the national time series. It nevertheless already incorporated some initial adjustments to bring it more into line with EU requirements while taking account of Austria's own needs. The questionnaire for the 1995 survey was completely aligned with the EU's list of characteristics in the very year of accession. Following a consequent recommendation by the Working Party of the Advisory Committee on Agricultural Statistics [*Fachbeirat für Agrarstatistik*], a full survey was conducted. Another sample survey was held in 1997.

Farm structure surveys are one of the most important sources of statistics on agriculture and forestry. The aim is to obtain up-to-date and relevant figures on the structure of agriculture and forestry in Austria that are comparable with the statistics of other Member States. This information is needed in order to investigate the reasons for the structural change in this important branch of the economy and to draw practical conclusions for the future. These data form an essential basis for making appropriate decisions on agricultural policy at both national and international level.

One of the reasons for making the farm structure survey a full survey was the wish to obtain data on the structure of all farms, particularly with a view to producing regional data. Another reason was to update the population for future sample surveys and the standing data in the register of agricultural and forestry holdings, which form the basis for addressing in all surveys on agricultural statistics. Admittedly, there is a constant flow of information on changes in connection with applications for aid, in the form of declarations by the bodies responsible for dealing with such applications, but this does not cover the entire agricultural sector, since not all farms take part in the aid schemes. Changes in standing data that come to our notice in other surveys on agricultural statistics or of which we are notified by other institutions are also taken into account in the farm register.

1.2. Legal base

The legal base at EU level was Council Regulation (EEC) No 571/88, amended by Council Regulation (EC) No 2467/96. The characteristics to be covered are listed in Annex I to Council Regulation (EEC) No 571/88; these are adjusted to take account of the requirements in specific cases. The 1999 farm structure survey was covered by Commission Decision 98/377/EC.

At national level, Austria's Federal Minister for Agriculture and Forestry adopted a Regulation (*BGBl.* No 251/19988) on the basis of the 1965 Federal Statistics Act (*BGBl.* No 91/1965).

This Regulation laid down:

- **The survey period**

Section 1. The Austrian Central Statistical Office was to conduct a full survey with 1 June 1999 as the reference date.

- **Subjects and characteristics to be covered**

Section 2. The subjects and characteristics to be covered are set out in the Annex, which forms an integral part of the Regulation.

- **Parties responsible for providing statistical information**

Section 3 (1) Without prejudice to (4), the following parties must provide information for this statistical survey:

1. Operators of agricultural and forestry holdings with a utilised agricultural area of at least 1 ha;
2. Operators of commercial vineyards of at least 25 ares, intensively-farmed areas of fruit trees of at least 15 ares, and areas under berries, strawberries, vegetables, flower and ornamental plants, vine and tree nurseries, or at least 10 ares under glass or foil;
3. Operators producing cultivated mushrooms for the market;
4. Operators of holdings exclusively geared to forestry with at least 3 ha of woodland;
5. Keepers of at least three head of cattle, five pigs, ten sheep, ten goats or 100 of any kind of poultry.

(2) For the purposes of this regulation, "operators" means person or groups on whose behalf and on whose responsibility the farm is run (holder).

(3) For the purposes of this regulation, "keepers" means person or groups on whose behalf and on whose responsibility the animals referred to in (5) are kept (holder).

(4) The obligation to provide information does not apply in the case of the characteristics of the survey subject "arable farming" that have already been covered in connection with applications to *Agrarmarkt Austria* for area-related aid (*Mehrfachantrag Flächen 1999* [multiple application, areas, 1999).

➢ **Implementation**

Section 4 (1) The survey must be conducted by the local authority competent for the parties responsible for providing statistical information (*Magistrat*). The parties responsible for providing statistical information must, between 1 and 30 June 1999, either provide the requisite information at the local authority's offices or be interviewed by the survey bodies at the farm. The local authority has the task of filling in the Austrian Central Statistical Office's questionnaires. The parties responsible for providing statistical information must be informed of the legal consequences under Section 11 (1) of the Federal Statistics Act of refusing to provide information or knowingly providing incomplete or false information.

Section 5 (1) The local authorities, except for towns/cites with their own statutes, must submit the completed questionnaires to the competent district administration by 9 July 1999.

(2) The district administrations and towns/cites with their own statutes must forward the completed forms to the Austrian Central Statistical Office via the official channels by 16 July 1999.

(3) The Austrian Central Statistical Office must forward the personal data collected under Section 2 to the Federal Minister for Agriculture and Forestry for incorporation into the Agriculture and Forestry Information System.

➢ **Payment of expenses**

Section 6 Local authorities shall be paid a fee of ATS 61.50 (€ 4.47) per farm covered.

➢ **Data protection**

Section 7 All bodies involved in the survey must ensure that the personal data collected are kept confidential as stipulated in the data-protection legislation in force.

The Annex to the national regulation lists the subjects and characteristics to be covered by the survey.

The implementation of the Farm Structure Survey is mainly based on the Federal Statistics Act of 1965, which laid down the general provisions:

1. rights and obligations of the Austrian Central Statistical Office (ÖSTAT) and responsibilities for the implementation of statistical surveys;
2. mandatory adoption of a regulation if the public is to be involved in surveys;
3. obligation of secrecy for the staff involved in evaluation and the survey bodies;
4. obligation to provide information and measures to be taken in the event of refusal.

When the Austrian Central Statistical Office (ÖSTAT) hived off from the Federal Administration and became a Federal Institution under Public Law [*Bundesanstalt öffentlichen Rechts*] (Statistics Austria - ST.AT), the new Federal Statistics Act of 2000 also came into force. This, *inter alia*, places greater emphasis on the obligation to use administrative data in order to reduce the burden on the parties responsible for providing information as much as possible.

1.3. Main changes in the 1990s

The last agricultural census in Austria was carried out in 1990 as a full survey but on national terms. For example, fisheries and beekeepers with a certain number of swarms were included. The first farm structure survey was carried out in 1993 and covered around 40 000 agricultural and forestry holdings. However, the questionnaire was still largely based on the 1990 agricultural census. In 1995 Austria joined the European Union and in the same year the questionnaire was entirely aligned with the EU model. On the recommendation of the Working Party of the Advisory Committee on Agricultural Statistics – based on the change in the characteristics to be covered – a full survey was conducted. This was followed be a sample survey of around 40 000 farms in 1997 and another full survey in 1999.

With the accession to the EU the following changes needed to be made to bring the list of characteristics into line with the EU model:

- horticulturally produced vegetables and flowers and ornamental plants had to be included under arable farming; up to 1995 these areas had been termed "*Erwerbsgartenland*" [commercial horticultural land].
- grassland that is no longer used has been classified under "other areas" 1995 since 1995; before that it had formed part of the utilised agricultural area in Austria.
- Christmas-tree plantations and areas under energy wood have been classified as woodland since 1995; before that they had formed part of the utilised agricultural area in Austria. Woodland nurseries had also been classified as woodland until 1995, but have been included in the utilised agricultural area since then (with the exception of woodland areas for a holding's own use).

- Agricultural and forestry workers also had to be reclassified. For example, before the accession people who declared themselves as pensioners or schoolchildren/students were not included under agricultural workers even if they had specified an activity on the farm. After the accession, Austria adopted the European practice of classifying people who had reached pensionable age but continued to work on an agricultural or forestry holding as agricultural or forestry workers. Similarly schoolchildren and students aged 16 or more have, since 1995, been classified as agricultural or forestry workers if they work on an agricultural or forestry holding.
- There have also been changes in the definition of non-family labour. Before the accession a distinction was made between permanent and non-permanent non-family labour. "Permanent non-family labour" meant people who worked on an agricultural or forestry holding as their main occupation - in other words, for at least half of their annual working hours. "Non-permanent non-family labour" meant people who did such work as a secondary occupation - in other words, for less than half of their annual working hours. In accordance with the EU rules, since 1995 people that worked on the holding every week during the 12-month period in question have been classified as regular non-family workers, irrespective of the number of hours worked per week. Non-regular non-family workers are those that did not work on the holding every week during the reference period.
- The hours worked have also been recorded differently since 1995.Before then, the work done on the farm was divided into three categories: "full-time", "main occupation" and "occasional work". Subsequently there was a breakdown into 0%, 1-24%, 25-49%, 50-74%, 75-99% and 100% of the annual working hours of a full-time worker.
- Another innovation since 1995 has been the mandatory recording of a manager for every agricultural or forestry holding.

Changes in national criteria since 1990 should also be borne in mind:

1990

- at least 1 ha of total area used at least in part for agriculture or forestry;
- commercial fruit- or wine-growing areas of at least 25 ares
- Areas under berries or pineapple strawberries, or commercial horticultural areas or nurseries of at least 10 ares
- presence of facilities for cultivation under glass or foil
- at least one head of cattle, or three pigs, five sheep or goats or 50 of any kind of poultry
- fish or cultivated mushroom production for the market
- apiaries with at least 20 swarms

1993

- at least 1 ha of total area used at least in part for agriculture or forestry;
- commercial fruit- or wine-growing areas of at least 25 ares
- Areas under berries or pineapple strawberries, or commercial horticultural areas or nurseries of at least 10 ares
- presence of facilities for cultivation under glass or foil
- at least one head of cattle, or three pigs, five sheep or goats or 50 of any kind of poultry

1995

- at least 1 ha of total area used at least in part for agriculture or forestry;
- commercial wine-growing areas of at least 25 ares
- intensively farmed areas of at least 15 ares under tree fruit
- areas under berries, strawberries, vegetables, flowers or ornamental plants, or vine or tree nurseries of at least 10 ares
- presence of facilities for cultivation under glass or foil
- at least one head of cattle, or three pigs, five sheep or goats or 50 of any kind of poultry
- cultivated mushroom production for the market

1997

- at least 1 ha of total area used at least in part for agriculture or forestry;
- commercial wine-growing areas of at least 25 ares
- intensively farmed areas of at least 15 ares under tree fruit
- areas under berries, strawberries, vegetables, flowers or ornamental plants, or vine or tree nurseries, including woodland nurseries, of at least 10 ares
- presence of facilities for cultivation under glass or foil
- at least one head of cattle, or three pigs, five sheep or goats or 50 of any kind of poultry
- cultivated mushroom production for the market

1999

- at least 1 ha used for agriculture
- at least 3 ha used for forestry
- commercial wine-growing areas of at least 25 ares
- intensively farmed areas of at least 15 ares under tree fruit
- areas under berries, strawberries, vegetables, flowers or ornamental plants, or vine or tree nurseries, including woodland nurseries of at least 10 ares
- operation of facilities for cultivation under glass or foil
- cultivated mushroom production for the market

- at least three head of cattle, or five pigs, ten sheep or goats or 100 of any kind of poultry

Additional changes in the coverage of agricultural and forestry holdings in the last ten years:

- since 1997 Austria has been permitted, on application and subject to the approval of the European Commission and the Agricultural Statistics Committee, to use administrative data on arable farming obtained in connection with aid provided by *Agrarmarkt Austria*.
- in 1999 the survey switched over to the exclusively use of machine-readable documents.
- a major change came about in 1999 when, in order to lighten the burden on respondents in application of the EU Directives, the national thresholds for inclusion in the survey were raised.
- As a result of these changes, a total of 24 400 of the smallest holdings no longer had to be covered in the 1999 Farm Structure Survey.
- This had the following consequences for the areas:
  - arable: -1 028 ha
  - permanent pasture: -3 357 ha
  - utilised agricultural area: -5 155 ha
  - area used for forestry: -34 747 ha
  - total: -47 173 ha

  In the case of livestock farming this meant that 4 709 holdings with 1 175 head of cattle, 4 618 pigs and 47 264 chickens no longer met the criteria for inclusion in the survey.

Independently of the different thresholds applied nationally, before the data were forwarded to Eurostat a standard delimitation was applied - in accordance with EU instructions - and those units that were questioned only for national purposes were excluded.

2. CONTENT

2.1. Characteristics

Most of the questionnaire had been specified in the applicable European legislation:

- ownership,
- arable farming,
- types of crop (land use),
- other market production,
- artificial irrigation,

- agricultural and forestry machinery and equipment,
- non-agricultural activity,
- agricultural accounting,
- training of manager in agriculture and forestry,
- facilities for storing fertilisers of animal origin,
- family and non-family agricultural and forestry workers.

Since the 1999 Farm Structure Survey replaced the former agricultural census, which had been conducted at ten-year intervals, the survey also covered the following items of national interest, on the recommendation of the Working Party of the Advisory Committee on Agricultural Statistics:

- data on tourism,
- the transport situation for agricultural and forestry holdings,
- forestry questions,
- special machinery and equipment for forestry,
- commuting by the owner of the holding,
- persons in household.

The definitions were largely based on the Commission Decision (2000/115/EC) of 24 November 1999.

The definitions departed from the EU definitions in only a few cases, largely because of national peculiarities such as the following:

- joint owners or beneficiaries under a will or an intestate are regarded as legal persons. This concerns only about 955 holdings (0.4%) however.
- "full-time" work was taken to be 2 000 hours per year (250 working days of eight hours). The Commission Decision provides for 1 800 per year (225 working days of eight hours). Since this figure was given only as a guide and - according to experts - is too low for Austria, the Working Party of the Advisory Committee on Agricultural Statistics decided on a higher figure.
- it is not always easy to make a precise distinction between agriculture and forestry, since many farms in Austria also have areas of woodland with the result that:
    - working hours in agriculture, for example, sometimes include time spent on forestry work
    - "four-wheeled tractors, track-laying tractors, tool carriers" also include machines used in forestry.
- the question about "other fully mechanised harvesters" was optional for Austria. At national level, data are collected only on machines for harvesting sugarbeet and potatoes. Machines for harvesting forage crops are therefore not included.

2.2. Questionnaire

The 1999 Farm Structure Survey was based on various data sources:

- **Farm Structure Survey and General Livestock Census**

Paper questionnaires were used for the direct consultation of farmers. These documents could be read in using optical character recognition. They therefore had to be filled in using the correct style of writing based on the sample given, and instructions were given not to fold or damage the documents as this would affect the quality of the input. The forms, bearing the number, name and address of the farm, were sent to the local authorities. Farms taking part in the EU aid schemes did not need to fill in the section dealing with arable farming, as data from administrative sources could be used.

1. *Farm Structure Survey*

   Machine-readable forms were used for the Farm Structure Survey for the first time. These comprised seven pages of questions and one page of explanations. About 580 000 copies – two per farm - were produced. Two recto-verso printed A3 sheets had to be filled in for each farm. The forms were perforated so that the A3 sheets could subsequently be split into smaller sections for reading in by machine. Pairs of A3 sheets - or after splitting, sets of four individual A4 sheets - that belonged together for each farm were identified by the farm number printed on each sheet.

2. *General Livestock Census*

   A form was also used for the General Livestock Census (around 210 000 copies). This consisted of a single A4 sheet.

- **Administrative data**

The administrative data on arable farming and land set aside from the IACS database of the Computer Centre for Agriculture, Forestry and Water Management were made available on CD-ROM. The Federal Ministry of Agriculture, Forestry, the Environment and Water Management sent data on farms using ecological methods to Statistics Austria by e-mail.

- Copy of questionnaires in Annex

3. METHODOLOGY

3.1. Structure of Survey

- **The project team**

The Farm Structure Survey team essentially comprised a total of 18 persons, but these did not all work exclusively on the Farm Structure Survey for the entire duration of the project and some left the team before the survey was completed. The team received support from computer experts and staff of the register team.

The survey fell into the following sections:

1. Five persons were responsible for preparatory work, planning and the organisational aspects.
2. There were an additional 13 persons working on the processing of the survey and checking for completeness and plausibility. The team received support for around 4 to 6 weeks from 10 students, who also helped with completeness checks and the preparatory work for machine-reading of the documents.
3. Tabulation, data analysis, publication and preparation of data for Eurostat were mainly carried out by two persons with the assistance of the EDP department.

The tasks of the team included:

- Drawing up the survey programme in accordance with the EU model, taking account of national requirements;
- Assisting in the drafting of the national regulation in cooperation with the Federal Ministry of Agriculture, Forestry, the Environment and Water Management
- Coordination of EDP department and register
- Developing the plausibility program in cooperation with the EDP department
- Instructing the EDP department on the programming for the tabulation work
- Drawing up the survey forms, implementation guidelines and other printed matter, getting the forms printed and sending the documents to the local authorities
- Drawing up documents for the authorities involved in the survey
- Training the survey bodies and the processing staff
- Assisting the survey bodies by telephone during the implementation phase
- Collecting, processing and combining data from the various sources
- Checking responses for completeness, issuing reminders and collecting missing data
- Checking data for completeness and plausibility
- Reporting parties refusing to provide data to the district administration with a view to administrative proceedings
- Tabulation, publication and dissemination of results
- Preparing the individual data sets according to the EU model and forwarding to Eurostat.

- **Advisory Committee on Agricultural Statistics**

The Federal Statistics Act of 1965 stipulated that "advisory committees" were to be set up for the various specialised fields. The Farm Structure Survey is

covered by the Advisory Committee on Agricultural Statistics, which is made up of experts from various Austrian institutions (representatives of the Federal Ministry of Agriculture, Forestry, the Environment and Water Management, offices of the *Land* governments, Chambers of Agriculture, the Conference of the Presidents of the Chambers of Agriculture, *LBG Wirtschaftstreuhand- und Beratungsges. m. b. H* [accountants and tax consultants], The Agricultural University of Vienna [*Universität für Bodenkultur*] etc.). The role of this body is to provide Statistics Austria, which is responsible for the survey as such, with advice and assistance, mainly of a technical nature, in the planning and implementation of the survey.

For the 1999 Farm Structure Survey the Working Party met four times to discuss the following main aspects:

1. Meeting of 15 May 1997:

- Discussion of the introduction of higher national thresholds to bring Austria into line with the EU inclusion thresholds
- Discussion of the new approach for covering labour
- Submission of proposals on questions of national interest

2. Meeting of 6 November 1997:

- Laying down national criteria
- Agreement on the implementation of a pilot survey
- Presentation of the survey programme taking account of the EU model
- Exchange of opinions on questions of national interest

3. Meeting of 12 February 1998:

- Discussion of national questions and reaching a consensus
- Adoption of the definitive survey programme

4. Meeting of 29 October 1998:

- Presentation, discussion and establishment of the national set of tables

- **The local authorities and their survey bodies**

Austria is divided into 2 360 administrative units - the local authorities [*Gemeinden*]. Each local authority therefore had on average around 100 active farming units, although the actual number varied from one to almost 900. The Farm Structure Survey was, like many surveys on agricultural statistics, carried out by the local authorities via survey bodies. In accordance with the Federal Statistics Act of 1965, the Mayors of the various local authorities were responsible for selecting the survey bodies. In most cases local-authority staff were deployed. This had the advantage that the staff were largely familiar with the parties responsible for providing information and local peculiarities. Local-authority staff conducted the survey mainly during their working hours - in other words, on top of their normal work. For this reason, some local authorities that did not have the necessary human resources

farmed out the work to outside bodies. The task of the survey bodies was either to invite the parties responsible for providing information to the local authority's offices for consultation or to visit the farms and interview them on the spot, and to help them in answering the questions. They were also responsible for ensuring that the forms were filled in properly and that all the units that should be covered in the local-authority area in question were in fact covered. After the survey period, it was their task to return the completed forms via the competent district administration [*Bezirksverwaltungsbehörde*] to Statistics Austria. The local authorities were obliged by law to carry out the Farm Structure Survey and were paid a flat-rate fee, as laid down in the regulation, for each farm covered.

3.2. Work plan

The initial preparatory work started in spring 1997.

Meetings of the 1999 Farm Structure Survey team to decide on the schedule of questions and evaluations	May 1997 – October 1998
Design of survey documents	1st quarter 1998
Adoption of a national Regulation	February-July 1998
Framework task for the EDP department	March 1998
Invitation to tender for printing the survey forms (approx. 580 000 A3 sheets)	2nd quarter 1998
Pilot survey in 6 Federal *Länder* (4 local authorities per *Land*, 4-5 farms per local authority)	June 1998
Drawing up schedule of Tables	3rd + 4th quarter 1998
Drawing up mailing list, checking documents and releasing for printing, sending the adjusted list of addresses to the company entrusted with the printing and dispatch of the 1999 FSS	February 1999
Printing, addressing and dispatching the survey documents by the company	March - May 1999
Training events run by Statistics Austria on the premises of the district administrations	April/May 1999
Detailed instructions for the EDP department for the design of the plausibility program and testing its functionality on the basis of around 20 fictional farms	May 1999
Sending the survey documents to the local authorities	May 1999
Reference date for the 1999 Farm Structure Survey	1 June 1999

Detailed instructions for the schedule of tables, including description of tables	August 1999
Collecting documents, checking the response for completeness, issuing reminders, sending documents to the EDP department	July 1999 – January 2000
Reference date for the 1999 General Livestock Census	1 December 1999
Processing files, processing large farms and cooperatives, plausibility, combining data from various sources	September 1999 – November 2000
Checking tables	December 2000
Sending individual data to Eurostat	31 December 2000
Dissemination and publishing of results in the form of press releases, rapid reports, publication, articles in Statistical News [*Statistische Nachrichten*], databank	2001

3.3. Preparing the survey operations

3.3.1. Population and sampling frame

- **Population**

Farms were obliged to provide information for the 1999 Farm Structure Survey if they met one of the following criteria:

- utilised agricultural area of at least 1 ha.
- at least 3 ha used for forestry.
- commercial vineyards of at least 25 ares, intensively-farmed areas of fruit trees of at least 15 ares, areas under berries, strawberries, vegetables, flowers and ornamental plants, vine and tree nurseries, or at least 10 ares under glass or foil with no open areas.
- at least three head of cattle, five pigs, ten sheep, ten goats or 100 of any kind of poultry or production of cultivated mushrooms for the market (no limit on area).

Under Council Regulation (EEC) No 571/88 the survey had to cover:

- agricultural holdings where the agricultural area utilised for farming is one hectare or more, and
- agricultural holdings where the agricultural area utilised for farming is less than one hectare, if they produce a certain proportion for sale or if their production unit exceeds certain physical thresholds.

For the transfer of data on individual holdings to Eurostat, therefore, the Working Party of the Advisory Committee on Agricultural Statistics recommended that the size categories laid down for the 1995 Farm Structure

Survey in agreement with the Federal Ministry of Agriculture and Forestry be maintained, i.e.:

- agricultural holdings with at least 1 ha utilised agricultural area;
- in the case of holdings with specialised crops (vines, fruit, horticulture, vine or tree nurseries, cultivation under glass) and holdings with livestock, the national lower limits applied.

- **Sampling frame**

The farm register lists all holdings in agriculture and forestry, including those that have ceased operating. The sampling frame, however, used only active holdings that met the criteria for inclusion in the 1999 Farm Structure Survey. Since the threshold was raised at national level in 1999, however, the 24 400 holdings that had appeared as active in the 1995 Farm Structure Survey and the 1995 General Livestock Census but no longer met the new criteria were eliminated.

Number of holdings according to 1995 Farm Structure Survey	263 500
Elimination as a result of the raising of the threshold	- 24 400
New holdings in the register	+ 5 500
Population for 1999 survey	244 600

- **Updating the farm register**

The farm register is constantly updated. All the information that becomes available to Statistics Austria in connection with various agricultural statistical surveys on changes in holdings, as well as information from the Chambers of Agriculture, Regional Farmers' Chambers [*Bezirksbauernkammer*] or local authorities are incorporated into the register. Changes in connection with applications for aid are also regularly taken into account in close cooperation with the competent bodies. Since Statistics Austria has the task of assigning farm numbers, which must be quoted in applications for aid, new holdings are automatically also covered.

New holdings that do not apply for aid are usually small. At national level, a more serious problem of undercoverage is the complete coverage of holdings that only operate forestry areas. It is sometimes difficult in such cases to determine the legal owner of the woodland in question - for example, if the area changes hands and the new operator is not known locally.

In February 1999 the population for the Farm Structure Survey was taken from the farm register, taking account of the information available up to that time, and an up-to-date address list was drawn up.

3.3.2. Survey design

The 1999 Farm Structure Survey took the form of a full survey, and administrative data were also used.

Use of administrative data

In order to avoid repeating questions and hence to relieve the burden on the parties responsible for providing information, we made sure that data already available from other sources were used. The Federal Statistics Act of 2000 stipulates that available administrative data must be used, since it is unreasonable to expect the parties responsible for providing information to provide the same information twice over a very short period of time.

3.3.3. Pilot survey

The plan was to use machine-readable forms instead of the traditional forms for the 1999 Farm Structure Survey. This fundamental change in procedure meant that we had to test whether or not the newly designed and differently worded forms could be readily understood. In June 1998, therefore, pilot surveys were carried out in 120 agricultural and forestry holdings. In cooperation with the *Land* Governments four local authorities that were as different from each other as possible as regards the structure of their farms were selected in Burgenland, Carinthia, Lower Austria, Upper Austria, Salzburg and Styria. Five farms per local-authority area were covered by the pilot survey. In order to increase the effectiveness of the pilot survey, it was conducted in the presence of representatives of Statistics Austria. It was designed in such a way that the owners of the farms – who took part voluntarily – were, as in the real survey, invited to the local authority's offices and interviewed by the survey body in order to find out what problems were encountered both by the parties responsible for providing information and by the survey bodies when using the new forms and/or where there were problems of comprehension when filling them in. The findings of this pilot survey were incorporated into the final version of the survey documents and the explanatory notes. In addition, the survey bodies could, during training, draw explicit attention to the problems that could be expected. The data collected under the pilot survey were not, however, used for the Farm Structure Survey proper.

The following problems were encountered:

- recording areas: in some cases people forgot to record areas such as gardens, buildings, courtyards or woodland.
- Alpine pasture posed another problem; this kind of land was either owned and operated by an individual or communally (cooperatives, easement, joint ownership). The operators were often not sure who had to report which areas on which holding.
- It seems vital that the survey bodies be given detailed explanations and tips for filling in the forms. The survey bodies in question thought that important definitions should, as far as possible, be included on the form itself.
- The parties responsible for providing information mainly complained about being repeatedly questioned by various institution (particularly when they were asked the same question more than once). This situation would improve with the use of administrative data, which was planned in any event, but it became apparent that the survey

bodies needed to be told during their training that they should inform the parties responsible for providing information of the plans to use administrative data, which meant that something was already being done to minimise the burden on them.

- It also emerged that the survey bodies needed to take enough time over the interviews and should allow about half an hour per holding for filling in the forms.

3.3.4. Informing and training the staff and respondents

- **Training the survey body**

In April or May 1999, shortly before the reference date for the survey proper, events were organised in all the regional capitals and Vienna for the purpose of informing the survey bodies. The survey bodies of the various local authorities in a given administrative area took part in these event. The staff of the Regional Farmers' Chambers responsible for dealing with applications for aid were also invited. The training itself was provided by staff of Statistics Austria. The main purpose of these events was to explain to the bodies entrusted with the implementation of the Farm Structure Survey how to fill in the forms correctly and completely. In view of the changes in approach resulting from the changeover to machine-readable forms it was particularly important to explain the new situation to the survey bodies. They were also given details of how the survey would be conducted in practice, taking account of the deadlines. Information events of this kind have the advantage that problems of comprehension can be cleared up on the spot. The survey bodies were also able to bring up regional problems and/or propose solutions.

During the survey proper, staff of Statistics Austria provided the survey bodies with advice by telephone.

- **Training staff and instructing the persons responsible for processing**

The staff of Statistics Austria were given working guidelines and corresponding instructions for processing the Farm Structure Survey. The EDP department was also given the task of producing the requisite software.

- **Information for contact persons**

In order to draw the attention of the agricultural and forestry community to the importance of the Farm Structure Survey, articles were published in the various agricultural journals shortly before it was conducted. The competent Federal Ministry, the *Land* Governments, all the district administrations, the Chambers of Agriculture and the District Farmers' Chambers all received a letter explaining how the 1999 structural survey was to be conducted.

3.4. Sampling, data collection and data entry

(Updating the survey, collecting data)

3.4.1. Drawing the sample

Both the Farm Structure Survey and the General Livestock Census were conducted as full surveys - in other words, they were intended to cover all agricultural and forestry holdings that met the criteria.

3.4.2. Data collection

- **Organisation of data collection**
  - **Farm Structure Survey**

Like most agricultural statistical surveys, the 1999 Farm Structure Survey was conducted with the help of the local authorities, which were assigned the task of implementing the survey at local level under the national regulation. In April/May 1999 Statistics Austria asked the *Land* Governments to issue, through the usual channel, the district administrations, the local authorities (*Magistrat*) of the towns/cities with their own statutes and other local authorities with official instructions for implementing the survey. The letters sent contained the most important information for the bodies concerned, such as procedure, instructions for filling in questionnaire and deadlines for returning them, so that the survey could go off smoothly.

In May 1999 the survey documents were sent by post direct from the printer to the local authorities. They comprised addressed machine-readable forms and a leaflet entitled "Guidelines for conducting the survey and explanatory notes" [*Durchführungsrichtlinien und Erläuterungen*] for the survey bodies, together with a covering letter, address lists, an extra 10% of blank forms for new holdings and "Official Announcements", which were to be posted in conspicuous places in the local-authority area.

The reference date for the 1999 Farm Structure Survey in Austria was 1 June 1999. Between 1 and 30 June 1999 the parties responsible for providing information either had to provide the information required at the local authority's offices [*Magistrat]* or had to be interviewed by the survey bodies on their farms. The procedure involved inviting the farm owners figuring on the forms or the accompanying address list to appear at the local authority's offices and interviewing them. Respondent were required to certify, by signing the documents, that the data were correct. Since full surveys are also used for updating the farm register, part of the procedure involved checking whether the names and addresses of the holdings were still correct and correcting them if there had been any changes. The forms for holdings to which none of the survey criteria applied - because the holding had ceased operation in the meantime or the land had been sold or leased - also had to be returned to Statistics Austria with a note to this effect in the space provided for giving reasons for leaving the form blank. In the case of the 7 700 or so holdings that had not applied for aid in 1999 the cultivated areas of arable land also had to be recorded. The local authorities were responsible for checking that all holdings were covered. Holdings that met the survey criteria but were not yet included in Statistics Austria's farm register and were not, therefore, on the address list also had to be covered using the blank forms provided. If respondents refused to provide information, or knowingly provided incomplete or false information, the survey body had to inform them of the

legal consequences. Statistics Austria was notified of persons that nevertheless refused to provide the information required and reported them to the competent administrative authority with a view to administrative proceedings.

The completed forms were to be returned to via the district administrations by 9 July 1999 at the latest, and to be forwarded to Statistics Austria by 16 July 1999 at the latest. Most of the local authorities and district administrations adhered to these deadlines, but data on some holdings that, for various reasons, provided the requisite information only after repeated warnings by the authorities arrived belatedly at the end of the year.

- **General Livestock Census**

The livestock kept by all agricultural and forestry holdings was to be recorded as at 1 December 1999. The surveys were also conducted by the competent local authorities. The survey method and procedure were similar to those used for the Farm Structure Survey, except that the survey bodies visited the holdings and conducted interviews on the spot. The survey period was 1 to 7 December 1999. The survey was conducted along similar lines to the Farm Structure Survey. Local authorities, except in the case of towns/cities with their own statutes, had to return the completed forms to the competent district administrations by 10 December 1999. These in turn had to forward them to Statistics Austria by 15 December 1999.

- **Administrative data**

In August 1999 Statistics Austria gave the Computer Centre for Agriculture, Forestry and Water Management the task of evaluating the cultivated areas of arable land on the basis of IACS data. For this purpose, however, Statistics Austria had to specify the corresponding classifications for items of data available in IACS from multiple applications that were required for the Farm Structure Survey. The data file produced by the Computer Centre contained the data on individual holdings needed for combining with the Farm Structure Survey - i.e. the local-authority and/or farm number and the individual area data were shown for each holding. These data were made available to Statistics Austria on CD-ROM and further processed by Statistics Austria's EDP department. In order to link the various data sets the administrative data first had to be entered into the mainframe system. The data on ecological farms could be obtained by e-mail from the Federal Ministry for Agriculture, Forestry and Water Management.

- **Data-input method**

Machine-readable forms (OCR) were used for the Farm Structure Survey for the first time. After they had been checked for completeness of response, the forms were prepared for reading in. First they were divided into "positive holdings" - i.e. those that met the survey criteria - and "negative holdings" - those that for one reason or another (e.g. closure, leasing of land etc.) were no longer subject to the obligation to provide information and were therefore eliminated. Since the reader could only handle A4 format, the A3 forms were first separated into A4 sheets using the perforations provided. At the same time the documents were checked for legibility. Illegible or soiled documents

also had to be separated. A separate set of documents with the address field or farm number filled in by hand also had to be produced as the reader had to be readjusted to deal with such documents. If documents were of inadequate quality for machine-reading, the data were extracted manually. The various sets of forms were placed in cardboard boxes and sent to the EDP department for reading in. In order to prevent gross errors or so as to be able to adjust the reader in good time, a random sample of the read-in data was checked.

Machine-readable forms have been used for the General Livestock Census for many years now. The data-input method was similar to that used for the Farm Structure Survey.

3.4.3. Checking the data

In preparation for the survey, the project team developed, in cooperation with the EDP department, a plausibility program based on 120 plausibility rules. It was designed so that incorrect, missing and implausible entries would be identified and either reported or immediately corrected.

The following distinctions were made:

- **Automatic errors**
  These were errors that could be automatically corrected according to programmed instructions - for example:
  - If there were multiple entries for the vocational training of the head of the holding, the entries for all but the highest level were automatically deleted.
  - In the case of holdings owned by legal persons, any entries under "family workers" were deleted.
  - Multiply entries for head of holding.

- **Information errors**
  This mainly involved identifying mistakes. In particular, limit values were incorporated into the program for certain items - to prevent entries being made in the wrong units in the case of specialised crops, for example. If these limits were exceeded, this fact was reported. The persons responsible for processing, either by means of investigation or on the basis of their specialised knowledge, then had to confirm that the data were correct or to make the necessary corrections in the case of incorrect entries.

- **Error items**
  These errors had to be corrected by the persons responsible for processing - either by consulting the parties responsible for providing information or on the basis of their specialised knowledge.

The functionality of the plausibility program was first checked using fictional holdings. Survey forms were filled in with a wide range of deliberate mistakes in order to check whether the program would recognise and report them.

On receipt the survey documents had to be checked for completeness against the address list to ensure that all the holdings had returned the forms sent to

them. Reminders were made by telephone in the case of missing forms from individual holdings or entire local authorities. Parties refusing to provide information were reported to the competent bodies with a view to administrative proceedings. 2 300 "newcomers" were passed on to the farm register team for checking. The team's task was to check whether or not these were in fact new units. This team was also responsible for assigning farm numbers or correcting names and addresses for updating the farm register.

Processing was carried out after the documents had been read in by means of extensive plausibility checking. The errors detected (incorrect entries, missing or implausible data) had to be clarified and rectified by the processing team. This work was not done only on paper as in the past, but it was also possible to make on-screen corrections on a PC. The correction application was designed in such a way that the document could be further processed only after certain points, such as miscalculated totals, had been corrected. Otherwise the data sets were rechecked by the plausibility program after processing. Holdings for which errors subsisted were listed once more and this process was repeated until the program detected no more errors.

The corrections were made by staff of Statistics Austria. In the plausibility work, particular attention was given to large holdings. A comparison was made with the previous survey (1995) and holdings with very different areas compared with the previous survey were listed. Years of experience have shown that incorrect figures are very often entered for the areas of large holdings. In most cases, however, it was possible to solve these problems by telephoning the parties responsible for providing information.

It was possible to integrate the administrative data on arable farming in 1999 provided by the Computer Centre for Agriculture, Forestry and Water Management into the structure survey via the common farm number. A link was then established with livestock figures, which had been determined in a separate survey (General Livestock Census with 1 December 1999 as the reference date).

- **Combining with data from other sources**
  - **Administrative data**

The combination of IACS data on individual holdings with data from the 1999 Farm Structure Survey led to inconsistencies because of the different aims characteristic of "aid" on the one hand and "statistics" on the other. These were eliminated by listing all the holdings for which data could not be unambiguously combined via the common farm number. In some cases it was possible to establish links with another holding through references in the farm register - for example, if a number of independent holdings had merged. This meant that there were several farm numbers. If different numbers were used for aid applications and statistical questionnaires, it was initially impossible to combine data. In the case of holdings for which there was no information on a second farm number in the farm register, the parties responsible for providing information had to be extensively investigated and consulted by telephone in order to clarify the situation. Differences in areas - partly resulting from differences in definitions and/or provision of data under different farm numbers - had to be investigated in around 7 000 cases. The Federal Ministry

for Agriculture, Forestry and Water Management was too late in approving the use of IACS data for this survey, so this approach could not be used in order to solve the problems more quickly.

- **1999 General Livestock Census**

The data on the number of livestock determined under the General Livestock Census in December 1999 were subsequently, as part of the evaluation, integrated into the Farm Structure Survey via the common farm number.

Around 2 000 farms that also met the criteria of the Farm Structure Survey, according to data from the General Livestock Census or applications for aid, were not covered by the Farm Structure Survey in June. In around 1 700 cases it was possible to impute data from the 1995 Farm Structure Survey. In the remaining cases the requisite data had to be determined by means of investigations.

3.4.4. Non-response

With a view to minimising non-response (forms not returned, refusal to provide information etc.), the survey bodies were regularly contacted by telephone to remind them about outstanding forms. It transpired that there were a variety of problems, including difficulty in reaching farm owners or persuading them to provide information; a number of farmers insisted on filling in the forms themselves and sometime the forms were mislaid and Statistics Austria had to send another copy. It ultimately proved possible to cover all the holdings except for a few where the owners were unable to provide information for health reasons or neither they nor other persons, such as family members, who could have provided information could be contacted. It was also possible to keep non-response by owners who had initially refused to provide information to a minimum.

During training, however, the survey bodies had also been told to take appropriate action if owners refused to provide information and to inform them of the legal consequences if they persisted. If they nevertheless insisted on not filling in the form, a note to this effect was entered in the space provided for reasons for leaving the form blank. Since Statistics Austria has no powers of enforcement for the implementation of administrative proceedings, these holdings had to be reported to the competent district administrations, which are the bodies responsible for administrative proceedings in Austria. The procedure involved a fine and a deadline for subsequent provision of the requisite information. The vast majority of the parties concerned (99.95%) reacted reasonably and provided the information at a later date.

3.5. Processing, analysis and estimation of data

(Analysis and correction of data collected)

3.5.1. Methods for handling missing or incorrect data items

After they had been read in, the data sets were checked for missing, incorrect or implausible information using an extensive plausibility program. Around

84 200 holdings (35%) with missing, incorrect or implausible information were identified. All the errors for each holding were placed on a "plausibility list" and the type of error identified (automatic, information, error item). This list helped the staff of Statistics Austria in their work on correcting the errors.

3.5.2. Estimation and sampling errors

The Farm Structure Survey was a full survey.

3.5.3. Non-sampling errors

The staff themselves could correct logical errors or obvious errors resulting from, for example, misreading by the OCR device.

In the case of missing or implausible entries, the individual data from the 1995 Farm Structure Survey were used, if possible, to supplement and/or check the data in order not to place an unnecessary burden on the parties responsible for providing information. Otherwise the respondents were contacted by telephone.

Input errors were mostly identified and corrected by the plausibility program.

Errors resulting from missing answers are insignificant, since by the time the survey was completed information had been obtained from virtually all the holdings.

Other errors: errors resulting from misreading by the OCR device could for the most part be eliminated by the plausibility program by, for example, checking totals or applying information error items.

3.5.4. Evaluation of estimates

After the individual data sets from the various sources had been combined via the common farm number and on completion of the plausibility checks, the figures entered and corrected were integrated into the tabulation program and corresponding working tables were drawn up. The values shown in the tables were checked - by comparing them with the results of the last Farm Structure Survey, *inter alia*. In the case of discrepancies that could not be logically explained, the results were analysed at regional level – or even down to the level of the individual holding in some cases -. in order to avoid errors in processing or in the programming of the tables.

4. PUBLICATION AND DISSEMINATION

It should be noted that there are discrepancies between the national evaluation and Eurostat's evaluation of the results of the Farm Structure Survey. The reason for this is that the EU excludes holdings that engage in forestry only. In view of the economic significance of woodland in Austria, however, these holdings are taken into account in the national evaluation.

Because of the different survey criteria (as described in 3.3.1) around 18 000 holdings were not included in the EU evaluation. These were mainly units that only had areas used for forestry, but also included holdings with less than 1 ha of utilised agricultural area, which did not therefore meet the EU

criteria, but had to be covered by the survey because of the national thresholds, since the area of land used for forestry was more than 3 ha. At national level, forestry is also an important factor in the classification of holdings as the area used for forestry is taken into account for determining the type of farming and calculating the standard gross margins.

Data are published in Austria in several phases

Eurostat – Eurofarm Databank
The data sets for individual holdings according to EU criteria or the EU model were sent to Eurostat on CD-ROM in December 2000 for incorporation into the Eurofarm databank.

Press release
The first information published nationally took the form of a press release containing the most important results. This appeared on completion of the survey in January 2001 and is also available on the Internet.

Rapid report
The rapid report published in February 2001 contains the most important tables showing the main results of the survey.

Statistical News
The various aspect of the Farm Structure Survey were discussed in the June, July and August 2001 issues of Statistical News. The articles contained graphs and charts etc. as well as a verbal description.

ISIS databank (Integrated Statistical Information System)
The most important results have been stored in this databank since March 2001. The ISIS databank is structured in such a way that individual queries are possible down to the level of the local-authority areas. An additional advantage is that the tables can be displayed multidimensionally. It is also possible to extract times series containing the most important results that go back as far as 1970.

Publication
The publication that appeared in December 2001 contains all the characteristics covered by the Farm Structure Survey in tabular form, together with definitions and the questionnaire. Accounts are also given of the legal bases and how the survey was conducted and the results processed. Finally there are verbal analyses of the results in comparison with previous surveys, together with comparative tables and graphs and charts etc.

Statistical Yearbook, Agricultural Statistics
In the course of 2001, Statistics Austria published various items containing results from the Farm Structure Survey in its various publications.

Agricultural and Forestry Holdings Information System [Land- und forstwirtschaftliches Betriebsinformationssystem - LFBIS]
Under the Regulation on the implementation of the Farm Structure Survey Statistics Austria was obliged to forward the personal data obtained to the Federal Minister for Agriculture, Forestry, the Environment and Water

Management for incorporation into the Agricultural and Forestry Holdings Information System.

5. SUGGESTIONS FOR FURTHER TASKS

- **Uniform standing data in registers**

  With the use of a variety of data sources, and in particular administrative data, there is a need for greater uniformity between the register of agricultural and forestry holdings and the registers used in connection with aid, so as to simplify the implementation and processing of surveys and the combination of data sets in the future.

- **Public relations**

  Experience in 1999 has shown that Austria will need to invest more in public relations before conducting a survey. The reluctance of operators to provide various authorities and organisations with information on their holdings is very great at present. It would undoubtedly be useful, therefore, to use targeted information to make respondents more aware of the need for - and the usefulness and implications of - comprehensive and accurate information, since this information will form an important basis for future decisions on agricultural policy.

- **Use of administrative data**

  Statistics Austria also intends in the future to make greater use of administrative data instead of asking statistical questions of its own. On the one hand it is obliged to do so under the Federal Statistics Act that came into force on 1 January 2000, and on the other the aim must be to relieve the burden on farmers and other respondents and not to annoy them unnecessarily by asking the same questions twice.

- **Coordination of lists of characteristics and standardisation of designations and definition**

  In order to facilitate the use of administrative data in statistical surveys and to avoid unnecessarily annoying the parties responsible for providing information, the lists of characteristics should be coordinated and the designation, concepts, explanations and definitions standardised.

- **Changing the reference date**

  The possibility of taking 1 December as the reference date for future Farm Structure Surveys instead of 1 June is being considered, as the reference date used hitherto (1 June) falls at a time when farmers already have a great deal of work to do in the fields and are therefore difficult to contact or are often reluctant to interrupt their work in order to go to the local authority's offices. We know this from the numerous complaints uttered at these offices, from the expressions of

reluctance that Statistics Austria repeatedly received by telephone and in writing, and from conversations during the pilot surveys and training. Another advantage of shifting the reference date would be that the Farm Structure Survey would be conducted together with the General Livestock Census in December, thus obviating the need for combining the results of the two surveys as in the past.

- **Form of the questionnaire**

  An important consideration for improving the quality of the data is the form of the questionnaire. Above all, the survey form must have a straightforward structure and contain questions that are formulated simply and in a way that is readily understood. There should also be detailed instructions and explanations.

- **Use or increased use of modern technology**

  The fact that consumers want to have data without delay - and preferably detailed data tailored to users' requirement - means that increasingly up-to-date technologies must be applied. Economic considerations and reductions in staff are additional reasons. However, increased use of technology and computers is not in itself a guarantee of success. For example, the time saved in 1999 thanks to the use of machine-readable documents for data collection and input was partly lost during the plausibility checking because of read errors.

  We are therefore considering conducting the next survey by electronic means instead of using paper questionnaires as in the past. A number of local authority employees expressed a wish to this effect during the training sessions for the 1999 Farm Structure Survey, and positive experience with an Internet application for the 2001 census has reinforced this decision. Most of the local authorities already have the necessary technical equipment, so this should not be a problem. However, the way in which the Farm Structure Survey will be conducted - also via an Internet application like the 2001 census, or by means of an electronic questionnaire sent to the local authorities on CD-ROM - still needs to be decided on the basis of various legal and technical considerations.

  If the Internet option is adopted, local authorities (survey bodies) will have password-protected access via the Internet to the data on farms in their area. If an electronic questionnaire is used, local authorities will receive information on the agricultural and forestry holdings covered by the survey on CD-ROM, together with instructions for installing the requisite program. These functions have been performed hitherto by the survey documents and the address list.

  With either option, data on the various holdings and the survey questions, together with blank fields for the entries to be filled in by the survey bodies, could be called up via a PC. This would

correspond to the function of the questionnaire or machine-readable document used in the past.

An advantage with both methods would be that a plausibility program could be run on the question program, which would mean that the program would not permit incorrect entries or certain implausible entries from the outset and that certain data had to be entered. In this way, subsequent queries regarding missing, incorrect or implausible data could largely be avoided.

The program would have to be easy to use, since not all the survey bodies can be assumed to have a perfect knowledge of computing. They could also have essential points brought to their attention by means of pop-ups or make use of explanatory texts. A hotline could also be set up to provide them with technical assistance.

- **The economic significance of woodland at EU level**

  Finally Austria would point out that woodland does not play as important a part in the economy of the EU as a whole as it does for holdings in Austria, many of which include a certain amount of woodland that makes a not inconsiderable contribution to the total yield of the holding.

SOURCES

The survey was conducted as part of the activities of Statistics Austria in cooperation with the Federal Ministry of Agriculture, Forestry, the Environment and Water Management and the Working Party on the Farm Structure Survey of the Advisory Committee on Agricultural Statistics.