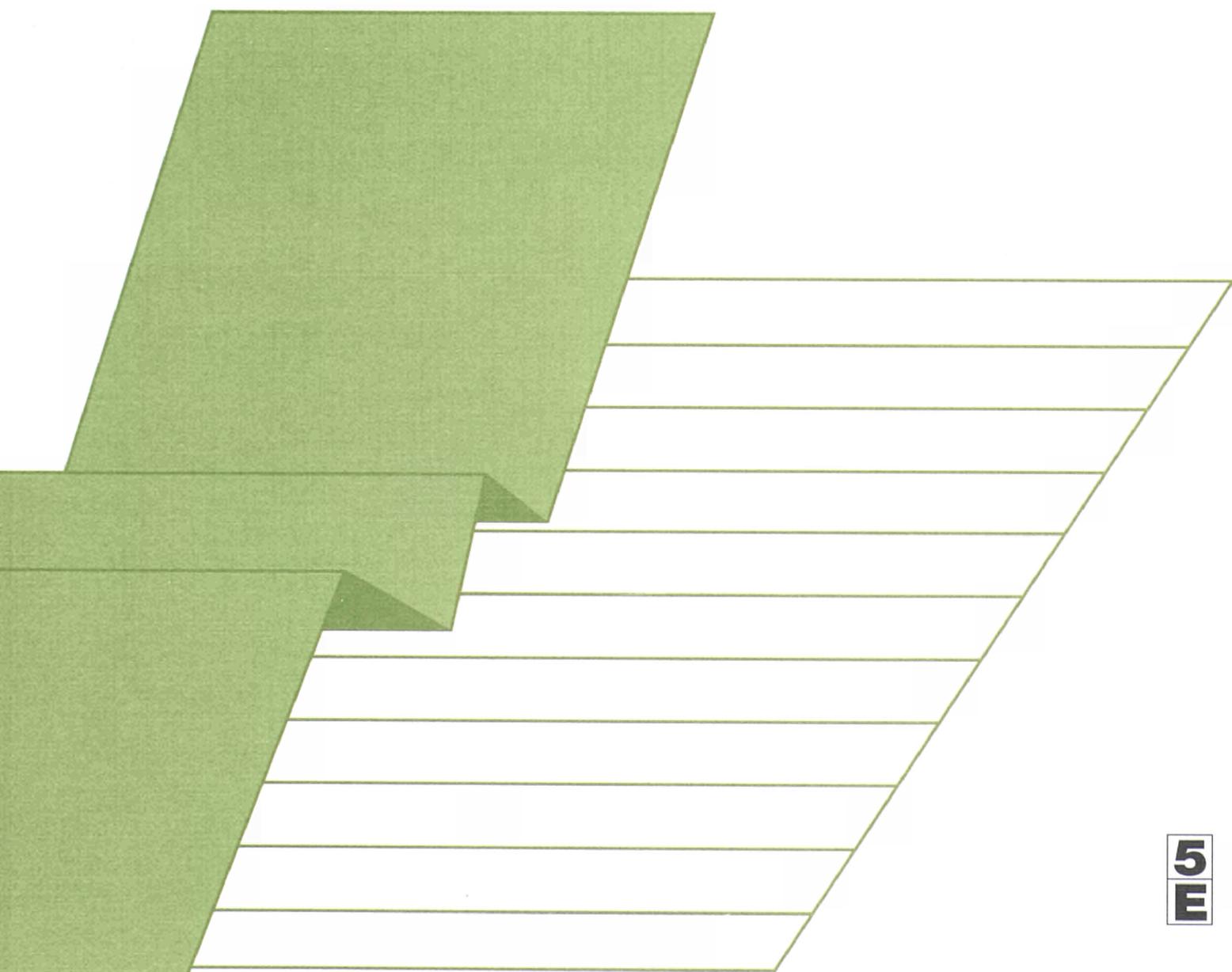


FARM STRUCTURE

Methodology of Community surveys





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Um Benutzern die Datensuche zu erleichtern, hat Eurostat Themenkreise, d. h. eine Untergliederung nach Sachgebieten, eingeführt. Daneben sind sowohl die Statistischen Dokumente als auch die Veröffentlichungen in bestimmte Reihen, wie zum Beispiel „Jahrbücher“, „Konjunktur“, „Methoden“, untergliedert, um den Zugriff auf die statistischen Informationen zu erleichtern.

Y. Franchet
Generaldirektor

It is Eurostat's responsibility to use the European statistical system to meet the requirements of the Commission and all parties involved in the development of the single market.

To ensure that the vast quantity of accessible data is made widely available, and to help each user make proper use of this information, Eurostat has set up two main categories of document: statistical documents and publications.

The statistical document is aimed at specialists and provides the most complete sets of data: reference data where the methodology is well-established, standardized, uniform and scientific. These data are presented in great detail. The statistical document is intended for experts who are capable of using their own means to seek out what they require. The information is provided on paper and/or on diskette, magnetic tape, CD-ROM. The white cover sheet bears a stylized motif which distinguishes the statistical document from other publications.

The publications proper tend to be compiled for a well-defined and targeted public, such as educational circles or political and administrative decision-makers. The information in these documents is selected, sorted and annotated to suit the target public. In this instance, therefore, Eurostat works in an advisory capacity.

Where the readership is wider and less well-defined, Eurostat provides the information required for an initial analysis, such as yearbooks and periodicals which contain data permitting more in-depth studies. These publications are available on paper or in videotext databases.

To help the user focus his research, Eurostat has created 'themes', i.e. subject classifications. The statistical documents and publications are listed by series: e.g. yearbooks, short-term trends or methodology in order to facilitate access to the statistical data.

Y. Franchet
Director-General

Pour établir, évaluer ou apprécier les différentes politiques communautaires, la Commission européenne a besoin d'informations.

Eurostat a pour mission, à travers le système statistique européen, de répondre aux besoins de la Commission et de l'ensemble des personnes impliquées dans le développement du marché unique.

Pour mettre à la disposition de tous l'importante quantité de données accessibles et faire en sorte que chacun puisse s'orienter correctement dans cet ensemble, deux grandes catégories de documents ont été créées: les documents statistiques et les publications.

Le document statistique s'adresse aux spécialistes. Il fournit les données les plus complètes: données de référence où la méthodologie est bien connue, standardisée, normalisée et scientifique. Ces données sont présentées à un niveau très détaillé. Le document statistique est destiné aux experts capables de rechercher, par leurs propres moyens, les données requises. Les informations sont alors disponibles sur papier et/ou sur disquette, bande magnétique, CD-ROM. La couverture blanche ornée d'un graphisme stylisé démarque le document statistique des autres publications.

Les publications proprement dites peuvent, elles, être réalisées pour un public bien déterminé, ciblé, par exemple l'enseignement ou les décideurs politiques ou administratifs. Des informations sélectionnées, triées et commentées en fonction de ce public lui sont apportées. Eurostat joue, dès lors, le rôle de conseiller.

Dans le cas d'un public plus large, moins défini, Eurostat procure des éléments nécessaires à une première analyse, les annuaires et les périodiques, dans lesquels figurent les renseignements adéquats pour approfondir l'étude. Ces publications sont présentées sur papier ou dans des banques de données de type vidéotex.

Pour aider l'utilisateur à s'orienter dans ses recherches, Eurostat a créé les thèmes, c'est-à-dire une classification par sujet. Les documents statistiques et les publications sont répertoriés par série — par exemple, annuaire, conjoncture, méthodologie — afin de faciliter l'accès aux informations statistiques.

Y. Franchet
Directeur général

FARM STRUCTURE

Methodology of Community surveys

Theme
Agriculture, forestry and fisheries
Series
Methods



A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (<http://europa.eu.int>)

Cataloguing data can be found at the end of this publication

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I. NEED FOR COMMUNITY SURVEYS ON THE STRUCTURE OF AGRICULTURAL HOLDINGS

The Commission's requirement for regular and comparable information on the structure of agricultural holdings arises out of the following considerations:

The data available in the Member States is not always suitable for reliable inter-country comparisons or for calculating Community results (EUR12). This is due to differences in the national list of characteristics, the definitions of individual characteristics and the field of survey.

In addition, the frequency of the surveys differs considerably from one country to another and therefore it is not always possible to have data for the same period.

In order to assess the agricultural situation in the Community and monitor the trend in the structure of agricultural holdings, comparable data are required for all Member States. To this end, statistical surveys are carried out at regular intervals (every two years) of those agricultural holdings which possess a utilized agricultural area of a certain size or produce marketable products on a certain scale or whose production exceeds certain natural thresholds. It was thus necessary to harmonise and synchronise the surveys in each State.

In addition, a Community typology was developed on a trial basis for the 1966/67 survey; this was revised for the 1975 survey. This classification system is based on the two main characteristics of the holding, viz. the type of farming and its economic size.

II. HISTORICAL BACKGROUND

The first *structure survey* in 1966/7 consisted of a random sample survey of 1.2 million agricultural holdings. The Member States received a contribution of 6 units of account, per holding surveyed, from the European Agricultural Guidance and Guarantee Fund (EAGGF) towards the expenditure incurred.

In 1970/71, on the occasion of the *general agricultural census* recommended by the FAO, the Member States were asked to provide information on a series of characteristics which could be used to produce a Community schedule of tables on paper, punchcards or magnetic media.

Most of the Member States supplied their results on the basis of a full-scale survey; only France provided tabular results on the basis of a sample. The information in the tabular programme corresponded in part to that for 1966/67. No contribution to the costs was given.

The 1975 *survey* was generally conducted on the lines of the 1966/67 survey; the catalogue of characteristics, the definitions and the scope were those of the 1966/67 survey as far as possible. It was carried out in the then Community of nine. The sample covered around 900 000 holdings. Member States conducting a full-scale survey could, if they wished, supply the tabular results on this basis; Belgium and the Netherlands did so. The individual data for each Member State was provided in a non-identifiable form to Eurostat which prepared the tabular results. A contribution to the cost of providing the Commission with this information was given to the amount of 12 units of account per holding.

The 1977 *survey* was based on the previous one though some points of methodology were changed. The tabular programme was less extensive. The Member States were granted a contribution towards the cost of carrying out the survey, the money being charged against the appropriations set aside for this purpose in the European Community's budget.

The 1977/80 was carried out in accordance with the FAO's recommendation on a world agricultural census, as a general census (full-scale survey) of all agricultural holdings. Nevertheless the Member States were able to survey some of the characteristics in the list by means of sampling; the United Kingdom did this in the case of the labour force and machinery. With the exception of Germany and Ireland, all the Member States transmitted tabular results on the basis of a full-scale survey.

The surveys of 1983, 1985 and 1987, too, have certain special features. Greece was covered for the first time in 1983, and Spain and Portugal as well in 1987. These three surveys were either carried out as full-scale or sample surveys. Table 1 shows the sampling rates in each of the Member States.

Table 1: sampling rates in the Member States

Member State	Sampling rate in the survey		
	1983	1985	1987
1	2	3	4
Belgium	100.0	100.0	100.0
Denmark	100.0	100.0 (3)	100.0 (3)
Germany	13.0	12.4	12.7
Greece	5.0	4.9	9.7
Spain	-	-	9.4
France	4.6	4.7	4.8
Ireland	8.7	8.8	8.8
Italy	100.0 (1)	2.2	1.5
Luxembourg	100.0	100.0	100.0
Netherlands	100.0	100.0	100.0
Portugal			12.0
United Kingdom	100.0 (2)	8.8 (2)	100.0 (2)

- 1) Only 10% of the questionnaires were evaluated
- 2) Full-scale survey except for the labour force.
- 3) Full-scale survey except for the activity of the holder and his spouse

III. THE 1989/90 STRUCTURE SURVEY

In 1989/90, a general census (full-scale survey of all agricultural holdings was held in agreement with the FAO's recommendation on a world-wide agricultural census. For certain characteristics, however, the Member States could survey by sampling; they were also able to hold the survey up to twelve months before or after the due date. In this case, they carried out a sample survey in addition to the basic survey which referred to the 1989 or 1990 crop year. Four Member States Germany (1989), Greece (1989), France (1990) and Ireland (1989) made use of this possibility. Results were provided at Member State, regional and survey district level. The additional sample survey provided results at Member State and regional level only. France sent individual data for its 1988 basic survey in the form of a sample survey (see table 2).

Table 2: Date of surveys

	Basic survey		Additional sample survey	
	Year	Sampling rate (%)	Year	Sampling rate (%)
Belgium	1990	100.0	-	-
Denmark	1989	30.0	-	-
Germany	1991	100.0	1989	12.7
Greece	1991	100.0	1989	10.0
Spain	1989	100.0	-	-
France	1988	14.0	1990	7.0
Ireland	1991	100.0	1989	?
Italy	1990	100.0	-	-
Luxembourg	1989	100.0	-	-
Netherlands	1990	25.0	-	-
Portugal	1989	100.0	-	-
United Kingdom	1990	27.0	-	-

The 1989/1990 structure survey was the 9th in the series of Community surveys and the first after 1977 for which the Member States (with the exception of Germany) sent individual data per holding instead of tabular results. Germany sent tabular results direct to Eurostat.

Eurostat guaranteed that individual data sent by the Member States would be used for statistical purposes only; any usage for administrative purposes is excluded.

The individual data were used to produce the tables in the tabular data bank (TDB) and the ad-hoc tables. The latter term refers to tables which were not originally scheduled in the Community programme for determining the contents of the TDB. Ad hoc tables can be requested from the Community authorities or the Statistical Offices of the Member States.

The results of the 1989/90 structure survey stored in the public part of the EUROFARM tabular databank refer to different reference years (see Table 3).

Table 3: type of survey and reference year for the 1989/90 structure survey by Member States

Member State	Type of survey	Sampling (%)	Reference year	Results recording ¹
Belgium	Exhaustive survey	100.0	1990	M, R,D
Denmark	Exhaustive survey	30.0	1989	M, R,D
Germany	Exhaustive survey	100.0	1991	M, R,D
Greece	Exhaustive survey	100.0	1991	M, R,D
Spain	Exhaustive survey	100.0	1989	M, R,D
France	Additional sample survey	7.0	1990	M, R,D
Ireland	Exhaustive survey	100.0	1991	M, R,D
Italy	Exhaustive survey	100.0	1990	M, R,D
Luxembourg	Exhaustive survey	100.0	1989	M, R,D
Netherlands	Exhaustive survey	25.0	1990	M, R,D
Portugal	Exhaustive survey	100.0	1989	M, R,D
United Kingdom	Exhaustive survey	27.0	1990	M, R,D

¹ M = Member State, R = Region, D = survey district.

To allow the Member States to carry out the 1989/90 basic survey, the Community made a contribution of ECU 20 for each agricultural holding covered and for which the complete data were sent to Eurostat up to a maximum amount per survey of:

- ECU 100 000 for Luxembourg
- ECU 500 000 for Belgium and for Denmark
- ECU 700 000 for the Netherlands
- ECU 1 100 000 for Ireland
- ECU 1 300 000 for the United Kingdom
- ECU 2 000 000 for Germany, Greece, Spain, France, Italy, and Portugal.

The 1993, 1995 and 1997 surveys were or will be carried out as full or sample surveys, similar to the 1989/90 basic survey though the BDT tabular programme will be less extensive. Results will be recorded at Member State and regional level only.

To carry out the sample surveys for these three years, the Member States will receive a contribution of ECU 20 for each agricultural holding for which complete data are sent to Eurostat up to a maximum amount per survey, corresponding per Member State to the maximum amount for the 1989/90 basic survey.

IV. THE EUROFARM SYSTEM

The EUROFARM system is a network of databanks which make it possible to evaluate the Community surveys on the structure of agricultural holdings for the purpose of both national and Community agricultural policy.

This databank system consists of the following modules:

- the databank for individual data (BDA), containing the individual data sent by the Member States,
- the databank which contains the programs (control programs, tabular production programs and service programs) for processing the individual data and tabular results,
- the databank which contains the lead data files for the geographical codes, etc.,
- the private tabular databank which contains the unprocessed BDT tabular results and the ad hoc tables,
- the public tabular databank which contains the tabular results released for general use by the Member States.

The individual data are sent to Eurostat in accordance with a standard individual data record laid down by Eurostat and the Member States, within a specific deadline (see Commission Decision 89/652/EEC)

By way of exception, Germany does not provide individual data but tabular results.

The BDT tabular results, ad hoc tables and other information in the private tabular databank are confidential.

The private tabular databank contains:

- the unprocessed tabular results, including the table cells for which confidentiality is not guaranteed,
- the processed tabular results,
- the relative standard error for each table cell,
- the results of the coherence tests.

The only persons who have access to this information are certain Eurostat officials who are responsible for the administration and processing of the records.

In addition, the competent departments of the Member States also have access to their own private part of this tabular databank.

The tabular results released by the Member States are stored in the public tabular databank; the statistical offices and ministries of the Member states and other privileged Commission users (e.g. DG VI) have access to this information.

V. LEGAL BASIS

The complete texts of the legal documents which form the basis for the Community surveys of the structure of agricultural holdings in the period from 1988 to 1997 are given in the Annex. The documents are:

- Council Regulation EEC No 571/88 of 29 February 1988 on the organisation of Community surveys on the structure of agricultural holdings in the period from 1988 to 1997,
- Commission Decision No 89/651/EEC of 26 October 1989 relating to the definitions of the characteristics and to the list of agricultural products for the surveys on the structure of agricultural holdings during the period 1988 to 1997,
- Commission Decision No 89/652/EEC of 26 October 1989 establishing, for the surveys on the structure of agricultural holdings between 1988 and 1997, deadlines for the communication of survey results to the Statistical Office of the European Communities,
- Commission Decision No 89/653/EEC of 26 October 1989 establishing, for the surveys on the structure of agricultural holdings between 1988 and 1997, a Community programme of tables to be stored in the Tabular Data Bank (BTD) of the Eurofarm system,
- Council Regulation (EEC) No 807/89 of 20 March 1989 on amending Annex I of Regulation (EEC) No 571/88 with respect to the set-aside of arable land,
- Commission Decision No 93/156/EEC of 9 February 1993 on amending Annex I of Council Regulation (EEC) No 807/89 with respect to the Community survey on the structure of agricultural holdings from 1993 to 1997,
- Commission Decision No 85/377/EEC of 7 June 1985 establishing a Community typology of agricultural holdings.

VI. FREQUENCY

The structure survey is held every second year. An agricultural census is held at intervals of approximately 10 years. A detailed summary of the type of survey, the year of survey and the period of survey is given in Table 4.

Table 4: Surveys of the structure of agricultural holdings from 1966/67 to 1989/90

Type of survey	Survey year	Survey period
Sample survey	1966/67	
Agricultural census	1970/71	
Sample survey	1975	01.03.1975 to 01.03.1976
Sample survey	1977	
Agricultural census	1979/80	01.04.1979 to 15.06.1980
Sample survey	1983	01.10.1982 to 31.01.1984
Sample survey	1985	01.12.1984 to 01.03.1986
Sample survey	1987	01.12.1986 to 01.03.1988
Agricultural census	1989/90	01.12.1988 to 01.03.1991

However, in those years in which an agricultural census was carried out, Member States were able to cover various parts of the list of characteristics by sampling. Those Member States which carried out, for national purposes, a full-scale survey in the years in which a sample survey was held were able to send their results for the full-scale survey.

VII. SURVEY UNIT AND FIELD OF OBSERVATION

Survey units are holdings

- a) with a utilised agricultural area of 1 ha or more
- b) agricultural holdings with a utilised agricultural area less than 1 ha if they market produce on a certain scale or if their production units exceed certain natural thresholds.

The Member States which wish to use a different survey threshold are, however, bound to lay down this threshold in such a way that only the smallest holdings are excluded, i.e. those which together make up not more than one per cent, within the meaning of Decision No 85/377/EEC, of their country.

Agricultural holdings are units, both technically and economically, which have a single management and produce agricultural products.

VIII. SURVEY PERIODS

Council Regulation (EEC No 571/88 of 29 February 1988 lays down the period for carrying out the surveys from 1988 to 1997.

- a) The Member States must carry out a basic survey, in one or several phases, as a general census (full-scale survey) covering all agricultural holdings in the period between 1 December 1988 and 1 March 1991, in accordance with the recommendations of the FAO on

a world-wide agricultural census. This basic survey must refer to the crop year which corresponds to the harvest in 1989 or 1990.

The Member States may, however, carry out random sampling for certain parts of the list of characteristics; these results are grossed up.

The Member States may also postpone or delay carrying out the basic survey for a period up to 12 months. In this case, they must carry out a sample survey, referring to one of the crop years 1989 or 1990, in addition to the basic survey.

- b) Between 1 December 1992 and 1 March 1994, the Member States must carry out a survey on the structure of agricultural holdings, referring to the 1993 harvest, either as a full-scale or sample survey (1993 agricultural structure survey).
- c) Between 1 December 1994 and 1 March 1996, the Member States must carry out a survey on the structure of agricultural holdings, corresponding to the 1995 harvest, either as a full-scale or sample survey (1995 agricultural structure survey).
- d) Between 1 December 1996 and 1 March 1998, the Member States must carry out a survey on the structure of agricultural holdings, referring to the 1997 harvest, either as a full-scale or sample survey (1997 agricultural structure survey).

IX. ORGANISATION OF THE SURVEY AND PRODUCTION OF TABULAR RESULTS

1. Work to be carried out by the Member States

The survey is carried out in each Member State (see the description of methodology). Data acquisition, plausibility checking and transferring the national individual data file to the EUROFARM form is the responsibility of each member State.

Before sending their individual data to Eurostat, the Member States are bound to apply the validation program which is supplied by Eurostat to each of them. Each Member State must ensure that, before forwarding its individual data, that these are complete and plausible, i.e. contain no errors. Each Member State is at liberty to use a national and more restrictive validation program in addition to the EUROFARM validation program.

In accordance with Council Regulation No 571/88, the Member States must provide Eurostat with certain control tables in addition to the individual data. These tables have a twofold purpose:

- to ensure that individual data have been checked in the responsible departments and that they are provided to Eurostat in the correct form, i.e. they are "plausible"
- to enable Eurostat to provide certain very important results as soon as the individual data are received.

As part of the 1989/1990 basic survey, BDT tables were sent to the Member States at national, regional and survey district level. The tabular results (both processed and unprocessed), as well as other information (cases of dominance where table cells cover 10 to 49 holdings, the relative standard error and the associated pointers) were sent on data medium or paper, according to the Member State's wishes. The Member State must determine, within a stated period, whether the confidentiality of data to be protected is guaranteed. If the Member State considers that additional

table cells must be protected as well, they must be marked and Eurostat informed accordingly. Eurostat is told in writing which data have been released. If necessary, Eurostat then carries out the additional protective measures and then releases the public part of the BDT tables. The procedure for ad-hoc tables is similar. In the case of the Federal Republic of Germany, the transfer of the BDT and ad hoc tables automatically means that they can be released.

2. Work to be carried out by Eurostat

Eurostat is responsible for the correct processing of individual data supplied by each Member State with the exception of Germany, i.e. Eurostat guarantees that the tabular results are correct in the formal sense.

When Eurostat has received the individual data from the Member States, these are validated in the EUROFARM system and the control tables are produced. If the individual data still contain errors, the error list is sent to the Member State in question which is asked to provide corrections. In most cases, the Member State is asked to provide a corrected magnetic tape. In addition, the control tables provided by the Member States are compared with those produced by Eurostat; this is to guarantee that the two sets of data are identical.

When the individual data contain no more errors, the BDR tabular results are produced.

When the tabular results are available, a computerised intra- and inter-table check is made on the unprocessed tabular results.

The so-called FILTER program is used in Eurostat; this guarantees the confidentiality of data to be protected (including dominance) and estimates the reliability of each individual table cell (see also Chapter XI).

The ad hoc tables are processed with a tabular generator created specifically for this purpose. The same principles apply to all ad hoc tables as to the BDT tables.

The information gained from the 1989/90 survey as regards table cell occupation and the relative standard error were the basis for revising the BDR tabular programme for the 1993 survey. It became apparent that the regional depth of detail and the breakdown of characteristics was too extensive for reliable tabular results to be obtained.

X. STATISTICAL CONFIDENTIALITY AND RELIABILITY OF THE TABULAR RESULTS

1. The FILTER Program

It is Eurostat's responsibility to ensure that the tabular results it publishes respect the laws of confidentiality. Eurostat uses the so-called FILTER program which ensures that confidential data (including dominance) are protected and also estimates the statistical reliability of every single table cell.

As this machine process cannot provide an absolute guarantee of confidentiality, it may be necessary to process individual cases manually as well. The Member States must ensure that confidentiality is guaranteed in accordance with the data protection regulations in their respective countries.

1.1 Functions of the FILTER Program

The basic function of the FILTER program is to guarantee statistical confidentiality of the tabular results. This is achieved in the following cases:

- table cells which are little occupied,
- cases of dominance,
- derivation of a table cell, rounded to zero, from the total result.

Further functions of this program are to calculate:

- the relative standard error for each cell,
- the error for each cell caused by rounding.

1.1.1 Rounding method

For reasons of confidentiality, all table cells after the grossing-up procedure (number of holdings, value of the characteristics) are rounded to zero where there are less than five holdings.

Cells containing 5 to 9 holdings are rounded either to zero or 10 depending on probability.

Cells are rounded to zero as follows:

5 holdings in 50% of the cases
6 holdings in 40% of the cases
7 holdings in 30% of the cases
8 holdings in 20% of the cases
9 holdings in 10% of the cases

Table cells representing 10 and more holdings are rounded to base 10 on a deterministic basis. The characteristic values allocated to the holdings (area, AWU, number of livestock etc.) are modified in relation to the number of holdings.

1.1.2 Dominance

Cases of dominance are determined in sample surveys from the grossed-up table cell. In accordance with the Eurostat definition, dominance applies when one or two holdings represent more than 85% of the value of one cell. These cells are treated as follows:

- When the value of the cell represents 5 to 9 holdings:
the value is rounded to zero by computer. One should note that cells (holdings, characteristic values) which represent 1 to 4 holdings have already been rounded to zero as part of the rounding procedure.
- When the value of the cell represents 10-49 holdings:
these cells are marked with a pointer as problematical cases. These authority in the Member State in question receives a list of these cases and it then uses its discretion whether to round other cells to zero or release them for publication.
- When the value of the cell represents 50 and more holdings:
the cells are published as one may assume that it is not possible to deduce the number of holdings.

1.1.3 Derivation of values of certain table cells (subtraction method)

Theoretically, the value of a table cell rounded to zero for reasons of confidentiality can be derived from the total result by the subtraction method. This is the case when a table cell was rounded to zero in a row or column or in a regional breakdown and all other table cells are occupied.

This can be virtually completely eliminated as all the table cells released for publication (including the total results) are modified by the rounding method used in the FILTER program. If the derived value corresponds to the actual value, this is a pure coincidence.

1.1.4 Sampling errors

A relative standard error is calculated for each table cell in the case of random samples. Each cell is marked with a specific pointer as follows:

- Pointer O RSE% < 5%
- Pointer A RSE% 5% to < 10%
- Pointer B RSE% 10% to < 20%
- Pointer C RSE% >= 20%.

Cells rounded to zero for reasons of confidentiality (low degree of occupation, cases of dominance) are given the pointer zero although the value of the RSE% may be greater than 5%. A table cell containing an actual zero thus cannot be distinguished from one rounded to zero.

1.1.5 Rounding errors

The error caused by rounding, which is calculated for every cell, is determined directly from the difference between the rounded value and the unprocessed grossed-up value. The relative rounding area is obtained by means of the following function:

$$RE\% = \frac{(\text{rounded value} - \text{grossed-up value})}{\text{grossed-up value}} * 100$$

XI. SURVEY CHARACTERISTICS AND FEATURES

1. List of characteristics

In accordance with Council Regulation (EEC) No 571/88, the list of characteristics covers the following areas:

- geographical situation of the holding
- legal personality and management of the holding
- type of tenure
- arable land
- kitchen gardens
- permanent pasture and meadow
- permanent crops
- other land
- combined and successive secondary cropping, mushrooms, irrigation, greenhouses, set-aside of arable land
- livestock

- tractors, cultivators, machinery and equipment
- farm labour force.

These categories are sub-divided further, some of them being optional. The Member States had the possibility of not surveying certain characteristics which were not present on their national territory or only to a statistically insignificant degree.

2. Geographical situation of the holding

The holding and all the information relating to it is taken as being in that district where the headquarters of the holding are situated. The headquarters of the holding are defined according to Member States' own rules.

The results are given for the 1989/90 basic survey and the 1993, 1995 and 1997 sample surveys at varying regional levels as the tables, produced at the necessary levels of aggregation, must guarantee the statistical reliability of the results.

3. Legal personality and management of the holding

3.1 The holder and manager of the holding

The structure surveys use two terms, each of which has a clear-cut definition, although they both apply to the same person in most cases: "holder" and "manager of the holding".

The holder is the (natural or legal) person in whose name the holding is operated. The holder can own the holding outright or rent it or be a hereditary long-time lease-holder or a usufructuary or a trustee. The holder may have delegated all or part of the power of decision to the manager of the holding.

If two or more persons have the function of a holder in one holding, only one is recorded, e.g. the person who carries the major portion of the risk or who mainly directs operations etc. If these criteria do not enable the holder to be determined, age can be used as a criterion. In the event of sub-leasing, the "sub lease-holder" is considered the holder.

The manager of the holding is usually, though not always, the same person as the holder. If this is not the case, the holder has charged someone else, e.g. a member of his family, to run the holding.

Only one person is recorded as manager for each holding. If several persons are engaged in the regular running of the holding, the person who makes the greatest contribution to operation is considered to manager.

Question B/02 explains whether the holder is the same person as the manager or not.

Table 5 shows the proportion of holders in the Member States and in EUR 12 who are also managers.

Table 5: Holders who are also managers by Member State, 1989/90

Member States	Total Holdings	Holdings whose holder is also manager	Proportion of holdings, whose holder is also manager, in total holdings
1	2	3	4
Belgium	85040	83920	98.7
Denmark	81270	79500	97.8
Germany	653550	625760	95.7
Greece	850140	847380	99.7
Spain	1593640	1431600	89.8
France	923590	908270	98.3
Ireland	170580	164830	96.6
Italy	2664550	2574150	96.6
Luxembourg	3950	3590	90.9
Netherlands	124800	118580	95.0
Portugal	598740	568970	95.0
United Kingdom			
EUR 12	243060	200030	82.3
	7992890	7606570	95.2

3.2 Natural person

Item B/01 asks whether the legal and economic responsibility for the holding is assumed by a natural person. A natural person is defined as an individual or group of persons, the latter being taken to mean, for example, married couple, siblings, joint heirships, etc.

In view of differing legislation in the Member States, it has not always been easy to find a standard interpretation of natural and legal persons. However, the goal was not so much legal or formal comparability but rather to compare situations represented by the various legal designations.

If the holder is a natural person, he may also be the manager - this is true in most cases. However, the manager may also be a member of the holder's family or a non-family worker. If the holder is a legal person, the manager is always a non-family worker (see Table 6).

Table 6: Holder is a natural or legal person

Total holdings			
Holder is a natural person			Holder is not a natural person
Holder is also manager	Manager is a member of the holder's family	Manager is not a member of the holder's family (non-family worker)	Manager is a non-family worker

3.3 Manager's agricultural training

Item B/03 asks about the agricultural training of the manager as follows:

- Exclusively practical experience

This is taken to mean experience gained from practical work on an agricultural holding.

- Basic training

Any training course completed at a general agricultural college and/or other institute of higher education in agriculture (including horticulture, viticulture, silviculture, pisciculture, veterinary science, agricultural technology or an associated subject).

A completed agricultural apprenticeship is also in this category.

- Full agricultural training

Any training course continuing for at least two years after the end of compulsory education and completed at an agricultural college, university or other institute of higher education in agriculture, horticulture, viticulture, silviculture, pisciculture, veterinary science, agricultural technology or an associated subject.

3.4 Agricultural accounts

Agricultural accounts must comprise at least systematic and regular records of all current income and expenditure for the purpose of establishing, at the end of the accounting period, the profit achieved by the holding.

An accounting system is also deemed to exist if such recording did not commence until some time during the last 12 months preceding the survey.

Agricultural accounts may serve as a basis for administration of the holding by the holding management; they may also be used to draw up a balance sheet and profit-and-loss account.

The following are not regarded as "accounting systems":

- occasional notes on certain operations in a ledger or notebook;
- income and expenditure records for only part of the holding's activities;
- data prepared for tax purposes only.

4. Type of tenure

The **utilised agricultural area (UAA)** of a holding is taken to be the total area taken up by arable land, permanent pasture, permanent crops and kitchen gardens (owner-farmed, tenant-farmed or worked free of charge).

Owner-farmed agricultural area means the area which belongs to the holder and is farmed by him; it includes areas farmed by him as usufructuary or heritable long-term lease-holder or under some other equivalent type of tenure.

Tenant-farmed agricultural area includes the areas rented by the holding in general for a period of at least 12 months and in return for a fixed rent agreed in advance (in cash, kind or otherwise), and for which there is a (written or oral) tenancy agreement.

5. Land use

This heading includes the following items:

- D Arable land
- E Kitchen gardens
- F Permanent pasture and meadow
- G Permanent crops
- H Other land
- I Combined and successive secondary cropping, mushrooms, irrigation, set-aside of arableland.

The total area of the holding (D to H) consists of the agricultural area utilised by the holding (D to G) and other land (H).

The agricultural area utilised for farming includes the area under main crops for harvest in the year of the survey. For the breakdown of land use by area farmed, each area is listed only once.

The crops given under category "I" should not be taken into account so that double counts are avoided in calculating the entire utilised agricultural area (UAA). Consequently, "irrigated crops" (I/03/b), "combined crops" (I/05) and "arable land set aside" (I/06) must be included with their areas in categories D to G at the appropriate place and a second time under I/01 to I/06.

To prevent double counting in calculating total utilised agricultural area, "successive secondary crops" (I/01) are not included in main crops (e.g. under "D - arable land"). Categories D/01 to D/21 comprise only the main crop grown in the area in question.

Mushrooms (I/02) are not included in the utilised agricultural area.

5.1 Arable land (D)

Land worked regularly, generally under a system of crop rotation. Arable land comprises crop categories D/01 to D/20 and fallow land (D/21).

5.2 Kitchen gardens (E)

Land separated from the rest of the holding and recognisable as kitchen garden, devoted to the cultivation of products which are mainly for consumption by persons living on the holding.

5.3 Permanent pasture and meadow (F)

This item comprises:

- F/01 Land other than rough grazing, not included in the crop rotation system, used for the permanent production (5 years or longer) of green forage crops, whether sown or self-seeded.

The following are excluded:

- rough grazing, whether used intermittently or permanently (F/02),
 - unused pasture and hill or mountain grazing (H/01).
- F/02 Rough grazing
- Pasture, usually on hilly land, not improved by fertilizer, cultivation, reseeding

or drainage.

This can include: stony ground, heath, moorland and deer forests in Scotland.

Rough grazing not in use is excluded (H/01).

5.4 Permanent crops (G)

Crops not grown in rotation, other than permanent pasture, which occupy the soil for a long period and yield crops over several years. This category includes nurseries (except non-commercial nurseries of forest trees grown in woods, which are included under woodland), and plants used for plaiting or weaving (oza, reeds, rushes, etc.: G/06). Permanent crops which are treated as vegetables or as ornamental or industrial plants (e.g. asparagus, roses, decorative shrubs, strawberries, hops) are not included.

5.5 Other land (H)

"Other land" includes unused agricultural land (H/01), woodland (H/02) and other land, e.g. land occupied by buildings, farmyards, tracks, ponds, quarries, infertile land, etc. (H/03).

5.6 Combined and successive secondary cropping, mushrooms, irrigation, set-aside of arable land (I)

This category covers:

- I/01 Successive secondary crops (excluding market-garden crops and crops under glass)
- I/02 Mushrooms
- I/03 Irrigated areas
- I/04 Ground area covered by greenhouses in use
- I/05 Combined crops
- I/06 Land subject to the set-aside incentive scheme for arable land

6. Livestock (J)

Number, by head, of animals belonging to the holding or agistment on the day of the survey. These animals may be on the holding (on utilised areas or in housing used by the holding) or off it (on communal grazing or in the course of migration, etc.).

Animals in agistment on the holding but belonging to a non-agricultural undertaking (e.g. feed-mill, slaughterhouse) are included.

Migrating herds which do not belong to holdings using agricultural areas are regarded as independent holdings.

The following are excluded:

- Animals in transit (e.g. female animals being taken for service),
- Animals in agistment on another holding.

7. Agricultural machinery (K)

Machinery used by the agricultural holding during the 12 months preceding the survey day. This includes:

- K/01 Four-wheeled tractors, track-laying tractors, tool carriers
- K/02 Cultivators, hoeing machines, rotary hoes, motor mowers
- K/03 Combine harvesters
- K/04 Forage harvesters
- K/05 Fully-mechanised potato harvesting machines
- K/06 Fully-mechanised sugarbeet harvesting machines
- K/07 Milking machinery (fixed or mobile)
- K/08 Separate milking parlours

8. Farm labour force (I)

This heading covers all persons having completed their compulsory education and who carried out agricultural work for the holding under survey during the 12 months up to the survey day.

This includes:

- the holder (L/01) and manager (L/01a)
- the holder's spouse (L/01)
- other members of the holder's family (L/03)
- non-family labour regularly employed (L/04)
- non-family labour not regularly employed (L/05 and L/06)

In the case of holdings whose holder is a legal person, no entry is made in the table cells for "holder", "spouse" and "other family members employed on the holding"; for these holdings, the manager is always recorded as a non-family worker.

8.1 Holder and manager (L/01 and L/01a)

The *holder* is the natural or legal person in whose name the holding is operated. The holder may have delegated all or part of the power of decision to the manager.

The *manager* is the person responsible for the normal daily running of the holding (see the legal form and running of the holding).

8.2 Holder's spouse (L/02)

A spouse is only recorded if he/she carries out agricultural work for the holding in question. If the holder's spouse is also the manager, he/she is not recorded under L/02 but under L/01/a.

8.3 Other members of the holder's family (L/03)

Other members of the holder's family or those other than the holder's spouse who live and work on the holding or who live elsewhere but do agricultural work on the holding.

Members of the holder's family means: the spouse, relatives in the ascending or descending line and other relatives (including those by marriage and by adoption). It is irrelevant whether or not such persons receive payment.

If the family is also manager, he/she is not recorded under L/03 but under L/01/a.

8.4 Non-family labour (L/04 to L/06)

All persons working for and paid by the agricultural holding other than the holder and members of the holder's family.

8.4.1 Non-family labour regularly employed (L/04)

Persons who worked every week on the holding under survey during the 12 months preceding the survey, irrespective of length of the working week.

Persons who worked regularly for part of that period but were unable, for any of the following reasons, to work for the entire period are also included:

1. Special conditions of production,
2. Absence owing to leave, military service, sickness, accident or death,
3. Commencement or cessation of employment on the holding,
4. Complete stoppage of work owing to *force majeure* (flooding, fire, etc.).

8.4.2 Non-family labour not regularly employed (L/05 and L/06)

Workers who did not work each week on the holding in the 12 months preceding the survey for a reason other than those listed under L/04.

8.5 Full-time employment

"Full-time" means the minimum hours required by the national provisions governing contracts of employment. If these do not indicate the number of hours, 1800 hours (225 working days of 8 hours each) is assumed.

A working day is a day during which a full-time worker is engaged on agricultural work. The minimum hours of work are considered to be 8 hours a day. Days of leave and sickness to not count as working days.

8.6 Other gainful activity

Every activity other than activity relating to agricultural work as defined under L, carried out for remuneration (salary, wages or other payment, including payment in kind, according to the service rendered). This also includes gainful activities carried out on the holding itself or another agricultural holding (camping sites, accommodation for tourists, etc.).

8.6.1 Major occupation

The "major occupation" is that activity declared by the respondent as being his main activity. It is normally an activity which occupies more time than that relating to the agricultural work done for the holding under survey.

8.6.2 Subsidiary occupation

A "subsidiary occupation" is any other activity of a respondent who declares the agricultural activity of the holding under survey to be his main activity. It is normally an activity which occupies less time than that relating to the agricultural work done for the holding under survey.

XII. UNITS OF MEASUREMENT

1. Annual work unit (AWU)

1.1 Definition

The annual work unit corresponds to the work performed by one person who is occupied with an agricultural holding on a full-time basis.

"Full-time" means the minimum hours of work required by the national provisions governing contracts of employment. If these do not indicate the number of hours, then 1800 hours (225 working days of 8 hours each) is assumed.

A working day means the daily hours of work of a worker occupied with agricultural work on a full-time basis. The minimum hours of work are considered to be 8 hours per day. Days of leave and sickness do not count as working days.

1.2 Calculation

The information required for the EEC list of characteristics cover the hours of work performed on the holding in five categories, expressed in percentage of a full-time worker, for the following persons: holder, manager, holder's spouse employed on the holding, other members of the holder's family and non-family labour regularly employed. The number of working days is recorded for workers not regularly employed.

Persons with a minimum working time of 1800 hours annually are considered "full-time" workers and count as one annual work unit (AWU). The performance of part-time workers is converted into AWU pro rata.

2. The Community typology for agricultural holdings

2.1 Procedure

The aim of the "Community typology for agricultural holdings", referred to in the following as "typology", is to identify and group holdings in accordance with their type of farming and economic size. The typology should allow sub-divisions which encompass groups of holdings with more or less homogenous features.

The characteristics on land use and livestock for each holding are assessed by means of the regional standard gross margins (SGM). A classification then follows on the basis of type of farming and the overall standard gross margin.

The ***type of farming*** of a holding is determined by the relative contribution of the various branches of production to the overall standard gross margin of this holding.

Depending on the accuracy of information on the type of farming, a distinction is made between:

- general types of farming (one-position),
- principal types of farming (two-position),
- particular types of farming (three-position),
- sub-divisions of certain particular types of farming (four-position).

Table 7 gives details of the typology for agricultural holdings.

The **economic size** (or the entire standard gross margin) is determined on the basis of the overall standard gross margin of the holding. It is given in European Size Units (ESU); one ESU corresponds to a standard gross margin of 1200 European Units of Account (ECU).

2.2 Definitions

A **gross margin** of an agricultural characteristic is the difference, expressed in a monetary value (ECU) between the production value (gross production) and certain costs (special costs) which are directly connected with production. As it is not possible, as part of the survey on the structure of agricultural holdings, to make these calculations for every single holding, a **standard gross margin (SGM)** is calculated for individual agricultural characteristics with the aid of standard regional coefficients. The standard gross margin is the gross margin which corresponds to the average situation of a given region for the agricultural characteristics in question. Standard gross margins are determined on the basis of three-yearly averages. In the 1989/1990 structure survey, the "1988" standard gross margins were calculated from the arithmetic mean for the years 1997, 1988 and 1989.

Gross production corresponds to the sum of the value of the main product(s) and the value of the subsidiary product(s). These values are calculated from the production per unit (less any losses) multiplied by the ex-farm price without VAT. Gross production also contains the amount of any subsidies linked to the product, the area of cultivation and/or livestock.

The **special costs** to be deducted from gross production are as follows:

1. for crop production

- Seeds and seedlings (bought in and produced on the holding),
- Bought-in fertiliser,
- Plant protection products.
- Various special costs containing the following:
 - water for irrigation purposes,
 - drying,
 - marketing (e.g. sorting, cleaning, packaging) and processing,
 - special insurance costs,
 - other special costs.

2. for animal production

- Costs of re-acquisition of livestock (adding to herd)
- Feed
 - feed concentrate (bought in or produced on the holding),
 - roughage.
- Various special costs containing the following:
 - veterinary costs,
 - costs for artificial insemination,
 - costs for performance checking and similar,
 - special marketing costs (e.g. sorting, cleaning, packaging) and processing,
 - special insurance costs,
 - other special costs.

XIII. PUBLICATIONS

The most important results gained from the 1989/90 EC Structure Survey were published in:

Survey of the Structure of Agricultural Holdings 1989/90: Main Results,

In addition, the user may also obtain these results on CD-ROM.

TABLE 7

CLASSIFICATION OF AGRICULTURAL HOLDINGS BY TYPE OF FARMING

A. CLASSIFICATION SCHEME

General type of farming	Principal type of farming	Particular type of farming	Subdivisions of particular farming
Specialist holdings - crops			
1. Specialist field crops	11. Specialist cereals 12. General field cropping	111. Specialist cereals (other than rice) 112. Specialist rice 113. Cereals and rice combined 121. Specialist root crops 122. Cereals and root crops combined 123. Specialist field vegetables 124. Various field crops	1241. Specialist tobacco 1242. Specialist cotton 1243. Specialist oilseed and textile crops 1244. Various field crops combined
2. Specialist horticulture	20. Specialist horticulture	201. Specialist market garden vegetables 202. Specialist flowers and ornamentals 203. General market garden cropping	2011. Specialist market garden vegetables - outdoor 2012. Specialist market garden vegetables - under glass 2013. Specialist market garden vegetables, outdoor and under glass combined 2021. Specialist flowers and ornamentals - outdoor 2022. Specialist flowers and ornamentals - under glass 2023. Specialist flowers and ornamentals, outdoor and under glass combined 2031. General market garden cropping - outdoor 2032. General market garden cropping - under glass 2033. Specialist mushrooms 2034. Various market garden crops combined
3. Specialist permanent crops	31. Specialist vineyards 32. Specialist fruit and citrus fruit	311. Specialist quality wine 312. Specialist wine other than quality wine 313. Quality and other wine combined 314. Vineyards for various types of production 321. Specialist fruit (other than citrus)	3141. Specialist table grapes 3142. Specialist raisins 3143. Mixed vineyards 3211. Specialist fresh fruit (other than citrus) 3212. Specialist nuts

General type of farming	Principal type of farming	Particular type of farming	Subdivisions of particular farming
3. Specialist permanent crops (Cont'd)	33. Specialist olives 34. Various permanent crops combined	322. Specialist citrus fruit 323. Fruit and citrus fruit combined 330. Specialist olives 340. Various permanent crops combined	3213. Fresh fruit (other than citrus) and nuts combined
4. Specialist grazing livestock	41. Specialist dairying 42. Specialist cattle - rearing and fattening 43. Cattle - dairying, rearing and fattening combined 44. Sheep, goats and other grazing livestock	411. Specialist milk production 412. Specialist milk production with cattle rearing 421. Specialist cattle - mainly rearing 422. Specialist cattle - mainly fattening 431. Cattle - dairying with rearing and fattening 432. Cattle - rearing and fattening with dairying 441. Specialist Sheep 442. Sheep and cattle combined 443. Specialist goats 444. Various grazing livestock - no dominant enterprise	
5. Specialist granivores	50. Specialist granivores	501. Specialist pigs 502. Specialist poultry 503. Various granivores combined	5011. Specialist pig rearing 5012. Specialist pig fattening 5013. Pig rearing and fattening combined 5021. Specialist layers 5022. Specialist poultry-meat 5023. Layers and poultry-meat, combined 5031. Pigs and poultry combined 5032. Pigs, poultry and other granivores combined
6. Mixed cropping	60. Mixed cropping	601. Market gardening and permanent crops combined 602. Field crops and market gardening combined 603. Field crops and vineyards combined 604. Field crops and permanent crops combined 605. Mixed cropping, mainly field crops 606. Mixed cropping, mainly market gardening or permanent crops	6061. Mixed cropping, mainly market gardening 6062. Mixed cropping, mainly permanent crops
7. Mixed livestock holdings	71. Mixed livestock, mainly grazing livestock	711. Mixed livestock, mainly dairying 712. Mixed livestock, mainly grazing livestock other than dairying	

General type of farming	Principal type of farming	Particular type of farming	Subdivisions of particular farming
7. Mixed livestock holdings (Cont'd)	72. Mixed livestock, mainly granivores	721. Mixed livestock; granivores and dairying combined 722. Mixed livestock: granivores and grazing livestock other than dairying combined 723. Mixed livestock: granivores with various livestock	
8. Mixed crops - livestock	81. Field crops - grazing livestock combined 82. Various crops and livestock combined	811. Field crops combined with dairying 812. Dairying combined with field crops 813. Field crops combined with grazing livestock other than dairying 814. Grazing livestock other than dairying combined with field crops 821. Field crops and granivores, combined 822. Permanent crops and grazing livestock combined 823. Various mixed crops and livestock	8231. Apiculture 8232. Various mixed holdings
9. Non-classifiable holdings			

BELGIUM

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I. INTRODUCTION

Surveys of the structure of agricultural holdings are carried out in Belgium once every 12 months. An exhaustive agricultural and horticultural census is carried on 15 May and 1 December of every year. These surveys also form the basis for the biennial structure surveys.

The characteristics surveyed in the **agricultural and horticultural census in May** are land use, livestock and agricultural machinery (characteristics A to K in the EU list of characteristics).

The **agricultural and horticultural census in December** provides data on the farm labour force (characteristic L in the EU list), winter cereals and livestock.

The agricultural and horticultural census carried out in May and December also provides the information on areas under crops which is to be forwarded to Eurostat every year. In the May census, the questions relate to areas under winter wheat, summer wheat, winter rye, spelt, malting barley, winter barley, summer barley, oats, maize, triticale, mixed cereals and other cereals. The December census provides information on areas under winter wheat, spelt, mixed cereals (rye/wheat mixtures), rye, winter barley and triticale.

Other surveys carried out at least once a year are the **surveys of the cattle population** (1 July and 1 December), **surveys of the pig population** (1 April, 1 August and 1 December) and the **surveys of the sheep and goat population** (1 December).

Table 1: Livestock survey programme

Reference date	Characteristics	Survey type F = exhaustive survey S = sample survey	Periodicity
1 April	Pigs	S	Annual
1 August	Pigs	S	Annual
1 December	Pigs	S	Annual
1 December	Cattle	S	Annual
1 July	Cattle	S	Annual
1 December	Sheep and goats	S	Annual

II. LEGAL BASIS

The legal basis for the national agricultural and horticultural census of 15 May is the Royal Decree issued pursuant to the Law of 4 July 1962, as amended by the Law of 1 August 1985.

III. PERIODICITY

The agricultural and horticultural censuses carried out on 15 May and 1 December of each year are exhaustive. Adjustments for the EU structure survey are made in the years concerned. The reference date for the characteristics "land use", "livestock" and "agricultural machinery" is 15 May. The reference period for the farm labour force is the 12 months beginning in December of the previous year.

IV. SCOPE OF THE SURVEY

All natural and legal persons whose holdings are established in Belgium and who belong to one of the following categories on 15 May of the year in question are required to provide information:

1. All professional farmers and stockbreeders, irrespective of the utilized agricultural area of their holdings;
2. All professional market gardeners, irrespective of the utilized agricultural area of their holdings;
3. Persons, authorities and other institutions who or which, in addition to other activities (work under contract) produce crop or animal products on a commercial basis, irrespective of their utilized agricultural area. Persons employed by agricultural contractors are not required to provide information;
4. Penitentiary establishments, boarding schools, convalescent and old peoples' homes and similar establishments, religious and other communities, research or experimental establishments, public authorities' cultivation departments which produce for their own requirements and holdings attached to educational establishments insofar as they cultivate at least one are of land (utilized agricultural area), or keep any of the animals referred to in the questionnaire, whether or not the products are marketed;
5. Persons, firms or establishments whose main or subsidiary activity is agricultural work for the account of commercial farmers or market gardeners or who/which provide the latter with agricultural machinery and plant insofar as they produce crop or animal products for commercial purposes;
6. Persons, firms or establishments whose main or subsidiary activity is agricultural work for the account of commercial farmers or market gardeners or who/which provide the latter with agricultural machinery and plant, whether or not they produce crop or animal products for commercial purposes;
7. Agricultural machinery cooperatives.

The scope of the agricultural and horticultural survey carried out on 1 December and the EU structure survey extends to the holdings described in points 1 to 5.

The survey unit is the agricultural holding, a technical/economic unit which is situated in a given region, is managed by a single manager and produces agricultural or horticultural products or practises stockbreeding.

The respondents are required to provide the following information:

- 1) 15 May : information on land use, livestock and agricultural machinery;
- 2) 1 December : information on the farm labour force, winter wheat and livestock.

The surveyed areas under crops must be situated on Belgian territory or land bordering Belgium, the latter being land which lies within 5.5 km from the border as the crow flies or which is situated in border municipalities.

V. SAMPLING PLAN

As the agricultural and horticultural survey carried out on 15 May and 1 December is exhaustive, there is no need for a sample plan.

VI. ORGANIZATION AND IMPLEMENTATION

1. Register of holdings

1.1 Purpose of the register

The Register of Holdings kept by the National Statistical Office is an aid in preparing, implementing and processing agricultural statistics. The main uses to which it is put are:

- implementation of the survey on 15 May;
- drawing the survey sample;
- as a list of addresses to which the Ministry of Agriculture sends information;
- implementation of special surveys.

1.2 Characteristics recorded in the register

The following characteristics are recorded in the register:

- municipality code (including codes for the survey district and area);
- agricultural region code;
- locality code;
- classification code of the holding (categories 1 to 7);
- the holding's registration number;
- name and address of the holder.

1.3 Management of the Register

The fast pace of change in agriculture means that Register entries on holdings and their characteristics have to be checked and updated continually. In the interests of sound management of the register, entries have to be made for newly created holdings, existing entries have to be updated and those relating to defunct holdings have to be deleted.

The register is updated annually (to take account of changes of address, new respondents, closures etc.) once the results of the survey on 15 May become available.

2. Organization of the survey

2.1 Preparation of the survey

Methodological, technical and organizational preparation of the survey is the responsibility of the National Statistical Office, in consultation with the Ministry of Agriculture.

2.1.1 Questionnaires

Four different questionnaires are used in the agricultural and horticultural survey carried out on 15 May:

- * Questionnaire I : Basic questionnaire form
- * Questionnaire II : Fruit-cultivation survey (intensive fruit cultivation)
- * Questionnaire III : Tree nursery survey
- * Questionnaire IV : Farming accidents.

Questionnaire I contains questions relating to the characteristics "land use", "livestock" and "agricultural machinery" (characteristics A to K of the list of characteristics laid down in Commission Decision 93/156/EEC of 9 February 1993) for the survey of 15 May. A separate questionnaire for the survey on 1 December is used to obtain information on the labour force (characteristics L) in the years when the EU structure survey is carried out.

The agricultural and horticultural survey of 1 December is carried out by enumerators who are appointed by the municipalities. Every holding is questioned and the replies are entered in the enumerator's list (maximum of 30 holdings per list). The results are then collated to give results at municipal level.

2.1.2 Development of the schedule of tables

The national schedule of tables contains the following characteristics:

- characteristics relating to crop types, types of livestock, type of utilization of area under crops and other data at the following levels: national, provincial, regional, agricultural region, administrative district and municipal;
- structural aspects: distribution of holdings by size class of utilized agricultural area (UAA) and land use, livestock population and commercial aspects of pig breeding etc.

These structural data are available for Belgium as a whole, the regions, provinces, agricultural regions, agricultural regions within individual provinces and administrative districts.

2.1.3 Creation of data-processing programs

The programs are written and developed by the Informatics Department of the National Statistical Institute, in collaboration with the officials responsible for agricultural statistics.

2.2 Implementation of the survey at local level

The mayors of the municipalities are responsible for conducting and supervising both the 15 May and 1 December surveys. Where necessary, municipalities are divided into survey districts. The mayor appoints an enumerator for each district from the municipal council staff. If the municipality lacks sufficient staff for the survey, the mayor and college of aldermen are required to submit proposals for recruiting the necessary personnel to the municipal council in good time.

The data are surveyed by the enumerator at the place of establishment of the holding in question, i.e. at the place where its main farm buildings are located. If the holding comprises several subholdings, the relevant data are obtained from each subholding. The questionnaire is filled in by the enumerator in the presence of the respondent, and is signed by both. The questions may also be asked on the premises of the municipal council, but only if so requested by the competent municipal authority.

Every municipality receives a list of addresses from the National Statistical Institute (based on the previous survey) and the questionnaires, plus a number of spare copies for any new holdings

which may have come into existence since the previous survey. The mayor and the enumerators receive written instructions on how to implement the survey.

The municipality appoints an enumerator to each survey district and gives him the required number of questionnaires (questionnaires I, II, III and IV) and the list of addresses. This list contains the names of all persons who were required to provide information for the 15 May survey of the previous year, and details of their utilized agricultural area. The respondent is obliged to state the reasons for any change in the utilized agricultural area of his holding.

The municipalities have 30 days for the 15 May survey and 20 days for the 1 December survey in which to return the completed questionnaires to the National Statistical Institute.

Any party responsible for providing information who refuses to do so, or who fails to do so in full, is liable, under the Law of 4 July 1962, as amended by the Law of 1 August 1985, to a fine of between FB 26 and FB 10 000.

2.3 Plausibility checks and compilation of tabular results

The National Statistical Institute first runs manual checks on the questionnaires received from the municipalities. The data are then recorded and transferred to magnetic tape. The next step involves automated plausibility checks. If errors are discovered, an error message is generated. The errors are corrected until the file is error-free. A data-processing program is then used to compile the tables, which are published in the National Statistical Institute's "Agricultural Statistics" brochure.

A special coding program is used to convert the detailed national list of characteristics into the EU list.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

Belgium does not yet have any procedure for safeguarding the statistical confidentiality of the tabular results. This situation is to be improved in future, perhaps by drawing on the experience which Belgium has acquired with Eurostat's FILTER programme.

VIII. National differences

1. Scope of the survey

The scope of the EU structure survey covers categories 1 to 5 set out in section IV.

2. Legal form and management of the holding

Corporations and associations which are treated as legal persons are:

- partnerships;
- limited partnerships;
- limited-liability companies;
- cooperatives.

3. Classification methods

Belgium uses the Community classification method for research purposes only. The Institute of Agricultural Economics is responsible for the Belgian system of classification. The National Statistical Institute has not yet made any further use of the classification method, although consideration is being given to a national publication containing the typology tables.

4. Annual work units (AWUs)

In Belgium, the holders and managers of holdings, their spouses and other members of their families, and non-family workers are considered to be in full-time employment if they work a minimum of 2 200 hours per year. All persons aged 14 and above may be regarded as agricultural workers.

5. Survey characteristics and special features

The following characteristics contained in the list of characteristics are not surveyed in Belgium, either because they are optional or because the item in question is not produced there:

D. Arable land

D/02	Durum wheat
D/07	Rice
D/13/c	Cotton
D/13/d/i/2	Sunflower seeds
D/13/d/i/3	Soya beans
D/13/d/iii/1	Sugar cane

G. Permanent crops

G/01/b	Fruit and berry species of subtropical climate zones
G/01/c	Nuts
G/02	Citrus plantations
G/03	Olive plantations
G/04	Vineyards

I. Combined and successive crops

I/01	Successive secondary crops
I/03/b	Cultivated area irrigated at least once a year
I/05	Combined (associated) crops.

In Belgium, the following additional characteristics are surveyed for national purposes:

- small-tree orchards: new plantings and changes;
- tree nurseries;
- farming accidents;
- dairy cows and sows, broken down by species and breed;
- pig breeding: type of holding;
- agricultural machinery: mineral fertilizer spreaders, drying equipment for green forage, grinding mills, threshers, crushers, mixing plants for cattle fodder, electronic and automatic feed distributor systems, self-propelling conveyors, slurry pumps, slurry silos, slurry treatment plants, slurry tanks (capacity and type), dung-channel cleaners, removal equipment for horizontal silos;
- successors to holders aged 50 and over.

IX. LESS-FAVOURED AND MOUNTAINOUS AREAS

1. Legal basis

Council Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas and Council Regulation (EEC) No 797/85 of 12 March 1985 on improving the efficiency of agricultural structures were incorporated into the Royal Decree of 20 August 1985.

2. Definition and grouping of territorial units

If 40% or more of a holding's utilized agricultural area is situated in a less-favoured area (within the meaning of the Royal Decree), the code "less-favoured area" is attributed to the farmer.

The codes were decided on in the light of the situation in 1987. Agricultural engineers perform on-site checks on the details provided by new respondents in municipalities at least part of which is situated in the problem area.

X. PUBLICATIONS

The results, other than those per district and municipality, are published in the National Statistical Institute's "Agricultural Statistics" brochure (see VI 2.1.2).

DENMARK

- I. INTRODUCTION
- II. LEGAL BASIS
- III. PERIODICITY
- IV. SCOPE OF THE SURVEY
- V. SAMPLING PLAN
 - 1. Basis of the sampling plan
 - 2. Stratification
 - 3. Grossing-up
- VI. ORGANIZATION AND IMPLEMENTATION OF THE CENSUS
 - 1. Register of holdings
 - 1.1 Characteristics recorded in the register
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 - 2. Survey stages
 - 2.1 Preparation of the survey
 - 2.1.1 Questionnaires
 - 2.1.2 Development of tabular programs
 - 2.1.3 Creation of data-processing programs
 - 2.2 Implementation of the survey at local level
 - 2.3 Plausibility checks and compilation of tabular results
- VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS
- VIII. NATIONAL DIFFERENCES
 - 1. Scope of the survey
 - 2. Classification methods
 - 3. Survey characteristics and special features
- IX. LESS-FAVOURLED AND MOUNTAINOUS AREAS
- X. PUBLICATIONS

I. INTRODUCTION

The reporting system in Denmark comprises surveys which are carried out several times a year and others which are carried out at longer intervals.

Surveys such as the Agriculture and Horticulture Survey are carried out in June of every year. The survey characteristics include land use, the cattle population, the labour force, and plant and equipment.

The Agriculture and Horticulture Survey is the main source of statistical information on crop products supplied to Eurostat. To calculate total crop production, however, the results for land use have to be supplemented by an estimate. The holdings included in the estimate are those which fall below the size threshold for inclusion in the Survey.

II. LEGAL BASIS

The structure surveys are carried out pursuant to the Law on Danish Statistics, which requires all holders to provide Danmarks Statistik with data on their holdings when so requested.

III. PERIODICITY

Up until 1983, the Agriculture and Horticulture Survey was carried out once a year, in the form of a full-scale survey. From 1984 onwards, a full-scale survey was carried out once every two years (odd-numbered years), alternating with a sample survey in intervening years (the sample comprising a quarter of all holdings).

It was decided on budgetary grounds that, as from 1990, the annual survey, which since 1984 had alternated between a full-scale survey and sample survey, would henceforth only be a sample survey. The full-scale survey carried out on 2 June 1989 (the reference date) was therefore the last of its kind.

IV. SCOPE OF THE SURVEY

Up to 1976, the survey units were holdings with:

- a) a utilized agricultural area (UAA) of at least 0.5 hectares;
- b) a UAA of less than 0.5 hectares in the case of livestock holdings.

The survey did not extend to holdings whose main branch of activity was horticulture or fruit growing, or to nurseries. These holdings' data on land use, the labour force and machinery were collected as part of the Horticulture Survey, which was carried out at the same time.

From 1977 onwards, horticultural holdings and holdings with a UAA of less than 0.5 hectares were included in the annual Agriculture Survey. The survey units in the period from 1977 to 1982 were holdings with:

- a) a UAA of at least 0.5 hectares (including holdings involved in horticulture);
- b) a UAA of less than 0.5 hectares in the case of holdings whose production value was estimated to be at least equivalent to that of 0.5 hectares of barley. The production value was calculated on the basis of the average standard gross margin (SGM) of the product in question.

The threshold for inclusion in the Agriculture and Horticulture Survey was increased in 1983. The survey units were henceforth holdings with:

- a) a UAA of at least 5 hectares (including horticultural holdings);
- b) a UAA of less than 5 hectares insofar as the holding's standard gross margin was at least 3 000 EUAs (European Units of Account).

Until 1984, a holding's standard gross margin was calculated on the basis of the average for the three years 1972, 1973 and 1974. The threshold value was fixed at 2 000 EUAs. In 1985, the base year for calculating the SGM was changed to 1980 and the threshold value raised to 3 000 EUAs.

A consequence of the raised survey threshold is that just under 7 400 agricultural and horticultural holdings (about 8% of the total) are no longer surveyed. Their combined agricultural production amounts to less than 0.5% of the national total.

Agricultural holdings are defined as holdings comprising an area of land, associated buildings, machinery and livestock which the owner regards as belonging to the same holding. This means that a holding can comprise land, buildings, etc. which belong to one or more independent owners or to one or more natural or legal persons constituting the owner. Leased land is attributed to the holding which utilizes it.

V. SAMPLING PLAN

Denmark's 1989 Agricultural Census took the form of a full-scale survey. However, the results transmitted to Eurostat for the 1989/90 EU Structure Survey were based on a 30% sample.

1. Basis of the sampling plan

Since 1989, new holdings have been established, but a larger number have ceased operations. Danmarks Statistik obtains information on new holdings via the communal registers of proprietorship. All newly established holdings are included in the appropriate stratum of the survey. All genuinely "active" holdings will in future be included in the population. Some of the holdings included in the sample survey are no longer involved in agriculture, either because they have been sold or leased to other holdings or because the holder only owns the residential buildings. These holdings are removed from the sample and do not reappear in subsequent surveys (e.g. the annual structure survey, the census of the cattle population or the annual crop survey).

The sample for the 1995 structure survey therefore comprises all holdings which have taken part in at least one survey since 1989 and which are still above the lower threshold (5 hectares or an SGM of 3 000 EUAs at 1980 prices). All holdings which have ceased activity are excluded from the sample.

2. Stratification

Generally speaking, it is reasonable to assume that a holding's utilization of its land, its cattle population, the size of its labour force and its technical equipment all depend on the type of holding, its economic size and its geographical position. For this reason, the holdings have been divided into 1 500 strata, according to the following criteria:

- a) type of farming;
- b) economic size;
- c) location (district).

The attribution of holdings to a stratum involves two steps. The first is to attribute the holding according to its type of farming and economic size. The sampling plan comprises 128 strata, which are defined according to the above criteria. The second step is to attribute the holdings in the 128 strata to individual districts on a proportional basis.

3. Grossing-up

Grossing-up the data is a simple procedure. An expansion factor is determined for each stratum by dividing the number of holdings in the population by the number of holdings excluded from each stratum. Holdings with no income are excluded from the sample, causing a corresponding increase in the expansion factor.

VI. ORGANIZATION AND IMPLEMENTATION OF THE CENSUS

1. Register of holdings

1.1 Characteristics recorded in the register

The Danish agricultural register comprises two parts: a list of addresses and a statistical register.

The **list of addresses** contains the names and addresses of all Danish agricultural holdings and is updated several times a year. Individual holdings are allocated a seven-digit code. The recorded data include the holding's name and address, a personal identification number and telephone number. It also contains data on the agricultural property belonging to the holding (a holding may comprise more than one piece of property). Finally, the list states whether the holding manager is its tenant or holder and whether the holder leases the land.

The **statistical register** contains all the data obtained from individual surveys and is updated once a year. Holdings are identified by the same seven-digit code appearing in the list of addresses. The register receives data input on a regular basis and is used partly for tabulation and partly as a basis for constructing samples for future surveys: both structure and other agricultural surveys.

By linking the two parts of the register it is possible to draw a sample with the required characteristics and ensure that the questionnaires are sent to the correct addresses.

1.2 Management of the register

The list of addresses is regularly updated using Danmarks Statistik's data on new holders, addresses for correspondence, telephone numbers etc. Outdated information is constantly deleted. There are five or six updates a year, including a thorough annual update in which data from the communal registers of proprietorship (which contain data on the holders of all agricultural holdings) are incorporated. In this way, new owners are automatically attributed to existing holdings. The communal registers are not always quite up to date, so that updates sometimes have to be completed manually.

Maintaining the statistical register and carrying out the survey are one and the same task. All responses are recorded, with the result that the register contains data on land use, the cattle population, agricultural machinery, the labour force and SGM, plus the classification code.

2. Survey stages

2.1 Preparation of the survey

Danmarks Statistik (more precisely, a special unit for agricultural statistics) bears sole responsibility for implementation of the structure survey.

2.1.1 Questionnaires

The structure survey is carried out by means of questionnaires which are sent by post. No interviews are held. The questionnaire is compiled every year between January and March, after consultation with representatives of the various sectors with a special interest in agricultural statistics (e.g. the Ministries of Agriculture and the Environment and agricultural associations). The questionnaires for the surveys required under the Regulation (for 1989, 1993, 1995 and 1997) have to be checked with particular care to ensure that they satisfy its provisions in full.

2.1.2 Development of tabular programs

The tabular programs are discussed only within Danmarks Statistik. The published tables are fairly detailed and satisfy most of the demands placed on structure statistics, in terms of both regional breakdown and breakdowns by size class or type of holding. Users requiring other tables may obtain them for a fee.

2.1.3 Creation of data-processing programs

The tabular programs are adjusted annually in line with the requirements of the structure survey. This is done automatically, without the intervention of programmers. The programs are SAS programs, which are relatively easy to control by other means.

2.2 Implementation of the survey at local level

As has already been stated, the survey is carried out by means of questionnaires which are sent out by post. As soon as the completed questionnaires start coming in, they are checked and, if possible, compared with the questionnaires which the same holdings completed the previous year. An important item to be checked is that the total agricultural area tallies with the sum of the areas under each individual crop. Farmers frequently have to be telephoned and asked for clarification. Occasionally, entire questionnaires have to be redone over the phone.

Checks are carried out by experienced staff, who also give on-the-job training to new colleagues. The entire survey is carried out by six members of staff, who increasingly are required to enter the data on PC themselves and identify any errors at the same time.

2.3 Plausibility checks and compilation of tabular results

The extreme care taken to check the replies means that reliable tabular results can be compiled directly. At tabular level, moreover, the results are put through extensive plausibility checks, which serve, above all, to detect errors relating to the poultry population. As there are relatively few holdings engaged in poultry farming, errors relating to an individual holding are easier to spot, particularly at regional level.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

It is extremely rare for problems of statistical confidentiality to arise from the publication of tabular results. However, if only three holdings are recorded in a table, the results are modified prior to publication. Cases of predominance are not examined.

VIII. NATIONAL DIFFERENCES

1. Scope of the survey

The results which Eurostat published in connection with the 1989/90 basic survey do not tally with the ones published at national level. This is because Eurostat's data only relate to a sample of about 25 500 of the 81 267 holdings counted in the 1989 census. The figures are fairly similar, however, and the minor differences should not be a problem for the user.

For the 1993 survey, Eurostat received data relating to the entire sample of 24 500 holdings. Eurostat's results should therefore tally with those published nationally, apart from differences caused by rounding.

2. Classification methods

Denmark does not intend to calculate a separate gross standard margin for fallow land. However, as the land concerned is part of the UAA, it will of course calculate the SGM for the land in question (but only once, unlike Eurostat).

The base year for the SGM is still 1980. This ensures comparable times series, but can of course also mean that the classification systems used by Eurostat and Danmarks Statistik give holdings different classification codes.

3. Survey characteristics and special features

In some cases, individual questions relating to special agricultural machinery or plant (e.g. straw incinerators) are not covered by the Eurostat questionnaire specifications.

For domestic purposes, the main crops are broken down into summer and winter cereals.

IX. LESS-FAVOURED AND MOUNTAINOUS AREAS

Not applicable to Denmark.

X. PUBLICATIONS

The results of the structure survey appear in the following publications:

Nyt fra Danmarks Statistik

Statistiske efterretninger, landbrug

Landbrugsstatistik

Statistik årbog

Statistik tiårsoversigt.

GERMANY

- I. INTRODUCTION
- II. LEGAL BASIS
- III. PERIODICITY
- IV. SURVEY UNIT AND FIELD OF OBSERVATION
- V. SAMPLE PLAN
 - 1. Basis of selection plan
 - 2. Stratification
 - 3. The sampling base
 - 4. Extrapolation
- VI. ORGANISATION AND EXECUTION OF THE SURVEY
 - 1. Register of holdings
 - 1.1 Tasks of the register
 - 1.2 Characteristics to be included in the register
 - 1.3 Register management
 - 2. Course of the survey
 - 2.1 Preparation of the survey
 - 2.1.1 Questionnaire
 - 2.1.2 Development of the table schedules
 - 2.1.3 Production of the EDP programs
 - 2.2 Conduct of the survey in the field
 - 2.3 Plausibility checks and presentation of tabular results
 - 2.4 Compiling of the farm report /agricultural census
- VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS
- VIII. NATIONAL DIFFERENCES
 - 1. Survey population and field of observation
 - 2. Legal form and management of holding
 - 3. Classification method
 - 4. Annual work units (AWU) - Labour force units (LFU)
 - 5. Survey characteristics and special features
- IX. LESS FAVOURED AREAS AND MOUNTAIN AREAS
 - 1. Legal bases
 - 2. Demarcation and grouping of territorial units
- X. PUBLICATIONS

I. INTRODUCTION

In Germany the reporting system is divided up into surveys which are conducted several times a year, surveys which are conducted annually and those conducted at longer intervals.

The individual surveys are linked in a system which at first sight appears very confusing. To throw more light on these links surveys whose results are aggregated in the structures surveys, are listed in Fig. 1.

A livestock census is conducted several times a year. The livestock census in December covers cattle, pigs, sheep, horses and poultry. It is conducted every second year (1986, 1988, 1990, 1992,...) as an exhaustive survey. In the intervening years, a sample survey is conducted of cattle, pigs and sheep production. The sample surveys of livestock conducted on 3 April and 3 August cover pig production and that of 3 June covers cattle and sheep production. Further information on livestock surveys is displayed in Fig. 2.

Fig. 2: Livestock survey programme

Reference date	Characteristics	Survey type E = exhaustive survey S = sample survey	Periodicity
3 April	Pigs	S	1991, 1992, ff
3 June	Cattle and sheep	S	1991, 1992, ff
3 August	Pigs	S	1991, 1992, ff
3 December	Cattle, pigs, sheep, horses and poultry	E	1990, 1992, ff
	Cattle, pigs and sheep	S	1989, 1991, ff

The survey of land use in May is conducted at annual intervals and covers characteristics on the use of agricultural areas. An exhaustive survey is conducted every four years (1987, 1991, 1995,...). In the intervening years land use characteristics are covered in sample surveys.

The labour force survey, the agricultural report and the agricultural census are conducted at longer intervals.

The labour force survey in May is conducted as a sample survey every second year, except in the years of an agricultural census (1991) when it is exhaustive.

At approximately 10-year intervals an agricultural census is conducted (1949, 1960, 1971, 1979, 1991) as an exhaustive survey. In the intervening years there is an agricultural report (1981, 1983, 1985, 1987, 1989,...). Every fourth year (1983, 1987) the agricultural report is conducted as an exhaustive survey and in the other years as a sample survey.

In 1991 the agricultural census and the "full" agricultural report coincided; their content was almost identical. The agricultural census included only a few additional characteristics.

The agricultural report is divided into

- a) a basic programme
- b) a supplementary programme

c) an additional programme.

For the **basic programme of the agricultural report**, information by individual holding from the surveys on land use (in May of the same year, the reference year), from the livestock census in December (of the previous year) and from the farm labour force survey (in May of the same year for the reporting month of April) is combined, using the holding number which is allocated in random fashion to each holding.

The following characteristics are surveyed under the **supplementary programme**:

- accounts
- socio-economic conditions
- ownership and tenancy conditions of the agricultural area, rents
- other non-farming gainful activities and sources of income
- supply and utilisation of agricultural machinery
- amount, utilisation and storage capacity for animal excrement.

If required the following characteristics may be included in the survey programme in the special **additional programme** after authorisation under a Regulation with the approval of the upper house of parliament (Bundesrat):

- producer co-operatives and -associations
- membership of social security systems, receipt of payments for ceasing production
- type and economic branch of other gainful activity carried out by the holder and his spouse

The characteristics of the supplementary programme are always covered in the form of a sample.

In the "full" agricultural reports (e.g. 1983 and 1987) the characteristics relating to land use and livestock population and also those relating to accounting and the socio-economic conditions of the holding are covered in a "full" survey while the farm labour force and all other characteristics of the supplementary programme (ownership and tenancy conditions, non-farming gainful activities and sources of income, amount, utilisation and storage capacity for animal excrement) are covered in a sample survey.

In the "sample" agricultural report all characteristics, also those relating to land use and cattle population, are covered by a sample.

Fig. 1: Survey programme for the Agricultural Report/Agricultural Census

Programme characteristics	Survey period	Reference period	Type of survey E=exhaustive S=sample	Periodicity
Basic programme				
-Characteristics of the main survey on land use	January to May	current calendar year	E S	1991, 1995, etc
-Characteristics of the livestock census in December	3.12 (until around) 15.12	3 December	E	1990, 1992
- Characteristics of the farm labour force	April/May	four successive weeks in April of current year	E S	only 1991 1993, 1995, etc
Supplementary programme				
-Accounts	"	Survey date	E S	1991, 1995, etc 1993, 1997, etc
-socio-economic conditions	"	April of previous year to March of current year	E S	1991, 1995, etc 1993, 1995, etc
-Volume, utilisation and storage capacity for animal excrement	"	April of previous year to March of current year	E S	1991, 1995, etc 1993, 1997, etc
-Ownership and tenancy conditions, rents		Survey date	E S	only 1991 1993, 1995, etc
-non-farming gainful activities and sources of income		April of previous year to March of current year	S	1991, 1993, etc
-Numbers, utilisation and ownership of agricultural machinery		12 months preceding the day of the first request for information	S	1991, 1995
Additional programme				
- producer cooperatives and associations	details on executions must be laid down by regulation with approval of the Federal Council (Bundesrat)		R	
- membership of social security systems, payments for ceasing production			R	
-type and economic branch of other gainful activities of holder and spouse			R	

II. LEGAL BASIS

The legal basis for conducting the national surveys is the Law on Agricultural Statistics (AgrStatG) of 23 September 1992 (Fed. Law Gaz.I p. 1632). Inter alia, it regulates the conduct of the land use survey, the livestock census, the farm labour force survey, the agricultural report and the agricultural census.

III. PERIODICITY

The agricultural report is conducted every second (odd) year. In every fourth year (1991, 1995 etc.), the characteristics are surveyed partly on an exhaustive basis and partly on a sample basis. In the intervening surveys (1993, 1997 etc.) the characteristics are surveyed on a sample basis only.

A detailed summary of the characteristics, the type of survey (exhaustive, sample) and periodicity is given in Summary 1.

IV. SURVEY AND OBSERVATION FIELD

The survey units are holdings

- a) with a utilised agricultural area (UAA) of at least one hectare,
- b) with natural production units which correspond to the average annual value of the market production of one hectare of utilised agricultural area,
- c) with a wooded area of at least one hectare.

Holdings are technical and economic units which have a single management and the output of which are agricultural and forestry products.

Agricultural holdings are holdings whose utilised agricultural area corresponds to at least one tenth of their wooded area.

Production units corresponding to the average annual value of the market production of one hectare of agricultural area are

Land categories:

30 ares vineyard (producing or not producing)
30 ares orchards (producing or not producing)
30 ares hops
30 ares tobacco

30 ares tree nurseries
30 ares outdoor fresh vegetables
10 ares flowers and ornamental plants outdoor
1 are cultivation under glass of vegetables for commercial purposes
1 are cultivation under glass of flowers and ornamental plants for commercial purposes
1 are aromatic and culinary plants or seed plots for commercial purposes

Animal categories:

8 head of cattle of any age
8 pigs of any weight
50 sheep of any age
200 laying chickens
200 young chickens
200 chickens for fattening, broiler and other chickens
200 geese, ducks and turkeys

The **survey field** of the exhaustive part of both the agricultural report and the agricultural census covers holdings falling under a), b) and c).

Only the agricultural holdings are included in the sample part of the agricultural report/agricultural census and in the intervening sample survey based agricultural reports.

The **survey and observation field** of the main survey on land use and the livestock census extends beyond that of the agricultural report.

The results of the survey are not recorded by location of the land farmed by the holding but by the holding's place of business. This latter is taken to be the commune in which the most important farm buildings are to be found.

V. SAMPLE SURVEY

1. Basis of the sampling plan

The sample in the F.R. of Germany is a **multi-purpose sample** as it provides results for various surveys. These are:

- the agricultural report
- the farm labour force survey
- the survey on land use and
- the EC structure survey.

2. Stratification

Stratification is on a **regional** basis, by *Länder*. The stratification characteristics and thresholds are determined solely by methodological criteria and experience. Experience has shown that a stable and effective grouping of holdings before selection is achieved by the stratification by size class of the utilised agricultural area (UAA). The sampling plan contains ten strata by UAA size class. Further strata are formed to increase accuracy. These strata encompass the fairly low number of holdings which stand out from the mass of other holdings by their special type of production (e.g. 3 000 or more laying hens or pullets). This ensures that these holdings are included in the sample with a sufficient degree of certainty. It also guarantees that holdings within the UAA size classes form virtually homogenous groups as regards the survey characteristics.

The strata are not demarcated in uniform fashion in the *Länder*. Demarcation of the special strata may differ from one land to another because of the different production conditions which prevail. These demarcations are updated from time to time, on the one hand to adapt them to structural changes in agriculture and on the other to prevent a disproportionate increase in the sample size (whilst retaining the sampling ratio). A summary of the sample plan for the 1989 agricultural report is given in Fig. 3.

In drawing the sample, each holding is allocated one by one to the first of the 20 strata in ascending order with a matching criterion. It is immaterial whether the holding fulfils other criteria of other strata.

3. Sample frame

The frame for drawing the sample is normally the magnetic tape with individual data from the previous exhaustive agricultural report. The data base is expanded by new additions; holdings which no longer exist or are below the coverage threshold are removed. The sample size for the agricultural reports is a maximum of 100 000 holdings.

The selection of the holdings is normally carried out every second year in the regional statistical offices by means of a standard selection program. The procedure is a combination of **systematic selection and random selection**. To ensure that the agricultural holdings are sufficiently represented at regional level, all holdings are arranged before selection pro stratum by regional hierarchical characteristics (districts, counties and communes).

The systematic selection procedure ("controlled sample selection") was used for the first time for the 1985 agricultural report. This is intended to avoid random breaks in result series which could arise with a new selection of holdings. Initially, five completely separate samples are drawn per region. Finally the sample which best represents the sample frame is used. The quality criterion can be the sum of the relative deviations of the extrapolated results in the selected sample holdings for given characteristics or groups of characteristics (dairy cows, total cattle, breeding sows, total pigs, cultivated areas, etc.) from the result in the sample universe.

4. Extrapolation

The results of the sample surveys are formed by freely extrapolating the figures obtained. The sample results are published in thousands to one decimal place. As the individual tabular values are rounded independently of the final total, slight deviations may occur in this total.

Summary 3 : Sampling plan for the survey based report on agriculture 1989 and for the other surveys carried out on the same lines*

Stratum number	Stratum definition (1)	Characteristics (2)	Bundes- gebiet	Schleswig- Holstein	Nieder- sachsen	Nordrhein- Westfalen	Hessen	Rheinland- Pfalz	Baden- Württen- berg	Bayern	Saarland	Stadt- Staaten (3)
1	Laying hens of pullets above 3000 (4)	Stratum occupation	2580	161	765	529	136	116	347	458	42	26
		Sampling fraction	95.50	100.00	100.00	100.00	100.00	100.00	66.60	100.00	100.00	100.00
		Sample	2464	161	765	529	136	116	231	458	42	26
2	breeding sow 100 and more or pigs for fattening 1000 and more (5)	Stratum occupation	3527	339	1038	1025	128	137	198	602	45	15
		Sampling fraction	88.30	100.00	100.00	66.60	100.00	100.00	63.70	100.00	100.00	80.00
		Sample	3116	339	1038	683	128	137	132	602	45	12
3	AA, 200 ha and more or vineyards 10 ha and more	Stratum occupation	1091	234	246	67	90	204	120	127	-	-
		Sampling fraction	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
		Sample	1091	234	246	67	90	204	120	127	-	-
4	Hops or tobacco	Stratum occupation	6096	27	19	-	9	586	1198	4257	-	-
		Sampling fraction	23.90	66.70	47.40	-	55.60	30.00	25.00	22.20	-	-
		Sample	1454	18	9	-	5	176	300	946	-	-
5	Vineyards less than 3 ha	Stratum occupation	43846	-	-	-	886	17969	20859	4099	33	-
		Sampling fraction	15.20	-	-	-	33.30	14.30	14.30	20.00	48.50	-
		Sample	6677	-	-	-	295	2567	2979	820	16	-
6	Vineyards 3 to 10 ha	Stratum occupation	9114	-	-	3	276	7068	1441	316	10	-
		Sampling fraction	29.90	-	-	100.00	50.00	28.60	30.00	39.90	50.00	-
		Sample	2724	-	-	3	138	2019	433	126	5	-
7	Horticulture (6) less than 1 ha AA	Stratum occupation	14035	434	1787	2460	1008	1408	3352	2578	176	832
		Sampling fraction	21.10	20.00	20.00	25.00	33.30	16.70	16.70	20.00	33.00	23.60
		Sample	2958	87	357	615	336	235	559	515	58	196
8	Horticulture (6) 1 to 2 ha AA	Stratum occupation	6242	229	900	1271	365	431	1566	1031	56	393
		Sampling fraction	36.40	49.80	30.00	40.00	49.90	33.20	28.60	40.00	67.90	39.70
		Sample	2272	114	270	509	182	143	448	412	38	156
9	Horticulture (6) 2 to 5 ha AA	Stratum occupation	5394	283	817	1139	318	341	1422	802	60	212
		Sampling fraction	47.80	49.80	40.10	50.00	66.70	50.10	40.00	50.00	80.00	66.00
		Sample	2580	141	328	570	212	171	569	401	48	140
10	Horticulture (6) 5 to 10 ha AA	Stratum occupation	2665	227	491	496	152	191	532	459	36	81
		Sampling fraction	64.90	66.50	59.90	66.70	75.00	66.50	60.00	66.70	100.00	63.00
		Sample	1729	151	294	331	114	127	319	306	36	51
11	Horticulture (6) 10 ha AA	Stratum occupation	3221	283	851	675	188	337	351	417	18	101
		Sampling fraction	87.80	100.00	80.00	80.00	100.00	100.00	80.10	100.00	100.00	81.20
		Sample	2827	283	681	540	188	337	281	417	18	82
12	Other types of agriculture less than 1 ha AA	Stratum occupation	9870	678	3906	1329	576	319	1503	1512	26	21
		Sampling fraction	13.00	20.10	10.00	20.00	33.30	33.50	4.00	7.70	30.80	47.60
		Sample	1286	136	391	266	192	107	60	116	8	10
13	Other types of agriculture 1 to 2 ha AA	Stratum occupation	67168	2754	11478	9649	6234	3455	13648	19286	527	137
		Sampling fraction	4.90	10.00	4.00	5.00	5.90	7.70	4.00	4.30	8.20	20.40
		Sample	3295	276	459	483	367	266	546	827	43	28
14	Other types of agriculture 2 to 5 ha AA	Stratum occupation	108091	2772	14811	34469	11400	6121	19129	38474	738	177
		Sampling fraction	4.90	10.00	5.00	5.50	5.90	6.30	4.00	3.90	10.00	22.60
		Sample	5259	277	741	803	670	383	765	1506	74	40
15	Other types of agriculture 5 to 10 ha AA	Stratum occupation	108506	2112	11695	12388	9373	5845	17618	48904	471	100
		Sampling fraction	6.40	14.30	6.70	10.00	7.70	7.70	5.60	5.00	12.30	25.00
		Sample	6981	302	779	1239	721	450	979	2428	58	25

Stratum number	Stratum definition (1)	Characteristics (2)	Bundes- gebiet	Schleswig- Holstein	Nieder- sachsen	Nordrhein- Westfalen	Hessen strate en.x	Rheinland- Pfalz	Baden- Württen- berg	Bayern	Saarland	Stadt- Staaten (3)
16	Other types of agriculture 10 to 20 ha AA	Stratum occupation	136606	2860	16522	16814	10403	6170	19780	63412	517	128
		Sampling fraction	9.10	14.30	8.30	11.10	12.50	11.10	9.10	7.70	19.90	28.10
		Sample	12439	409	1377	1868	1301	685	1798	4862	103	36
17	Other types of agriculture 20 to 30 AA	Stratum occupation	83032	3305	13841	12504	6134	3619	10791	32447	306	85
		Sampling fraction	12.20	16.70	11.10	14.30	16.70	14.30	12.50	10.00	33.30	36.50
		Sample	10137	551	1538	1787	1022	517	1349	3240	102	31
18	Other types of agriculture 30 to 50 ha AA	Stratum occupation	72586	6524	19200	11933	4928	3610	7691	18197	348	155
		Sampling fraction	14.90	16.70	12.50	14.30	20.00	16.70	16.70	14.30	39.90	31.60
		Sample	10844	1088	2400	1705	985	602	1282	2594	139	49
19	Other types of agriculture 50 to 100 ha AA	Stratum occupation	33497	6081	12613	4282	1744	1683	2589	4077	316	112
		Sampling fraction	25.70	25.00	20.00	25.00	40.00	33.30	30.00	29.90	66.80	37.50
		Sample	8621	1520	2523	1070	697	561	777	1220	211	42
20	Other types of agriculture 100 ha AA and more	Stratum occupation	4415	1020	1705	483	202	164	307	473	46	15
		Sampling fraction	58.70	50.00	40.00	100.00	100.00	66.50	74.90	66.20	100.00	100.00
		Sample	2590	510	682	483	202	109	230	313	46	15
1 to 20 total		Stratum occupation	721582	30323	112685	91516	54550	59774	124442	241928	3773	2591
		Sampling fraction	12.70	21.80	13.20	14.80	14.60	16.60	11.40	9.20	28.90	36.30
		Sample	91344	6597	14878	13551	7981	9912	14157	22236	1092	940

- * These are Agricultural Labour Force Statistics and the EC Structure Survey.
The Land Use Survey and Livestock Survey conducted in December of the year before the Agricultural Report are exhaustive surveys.
The following are included:
Agricultural holdings with 1 ha UAA or over and agricultural holdings under 1 ha UAA (including holdings without UAA) which have the minimum size and natural production units equivalent to at least the average value of an annual agricultural market production of 1 ha UAA.
The number of selected sample holdings also includes the anticipated deductions of holdings, e.g. after they have been abandoned or fallen below the survey threshold. The number of holdings actually included in the scope of the survey and depiction was about 86000 in the F.R. of Germany in 1988.
- (1) The following have used slightly different stratum limits:
- Hamburg, Bremen, Saarland and Berlin (West):
- Stratum 1: 1 000 or more laying hens or pullets or 100 or more table hens or geese, ducks or turkeys.
Stratum 2: 50 or more breeding sows or 200 or more fattening pigs.
- Niedersachsen: Stratum 1: 5 000 or more laying hens or pullets or 10 000 or more table hens or geese, ducks or turkeys.
Hessen: Stratum 2: ... or 500 or more fattening pigs.
Rheinland-Pfalz: Stratum 2: ... or 500 or more fattening pigs.
Stratum 3: ... or 15 ha or more of vineyards.
Stratum 6: 3 - 15 ha.
- Baden-Württemberg: Stratum 2: 125 or more breeding sows or 700 or more fattening pigs.
Stratum 9: 2-7 ha.
Stratum 10: 7 - 15 ha.
Stratum 11: 15 ha or more.
- Bayern: Stratum 2: ... or 600 or more fattening pigs.
- (2) Stratum occupation = number of holdings; sampling fraction = in percentage; sample = number of holdings
(3) Hamburg, Bremen and Berlin (West).
(4) Or 500 or more table hens or 500 or more geese, ducks or turkeys.
(5) Young or fattening pigs.
(6) Agricultural holdings on which the sum of the areas under vegetables, asparagus, strawberries, flowers, ornamental plants, horticultural seed plantations, tree nurseries and fruit make up over 20 % of the holding's UAA.

VI. ORGANISATION AND EXECUTION OF THE SURVEY

1. Register of holdings

1.1 Tasks of the register

The holding register, which is compiled and managed solely in the regional statistical offices, is used as an aid in **preparing, compiling and processing** agricultural statistics series (§ 97 AgrStatG). The register is used primarily

- for determining and checking the survey units for individual series of agricultural statistics,
- for drawing the sample,
- for addressing and dispatching the survey documents,
- for checking receipt of the questionnaires and for queries to respondents,
- for determining respondents' workload in terms of agricultural statistics and
- for allocating and aggregating data from individual series of agricultural statistics (e.g. survey on land use, livestock census, farm labour force survey) for agricultural statistics purposes.

When allocating and aggregating data for statistical purposes, as well as for other types of analysis, the survey characteristics of the following surveys may be used:

- survey on land use,
- livestock census,
- farm labour force survey,
- agricultural report,
- agricultural census,
- poultry statistics,
- timber statistics,
- accounting and market economic reports in agriculture.

1.2 Characteristics to be included in the register

Under § 97 AgrStatG, the following auxiliary and survey characteristics may be included in the register:

- a holding number allocated at random (this contains no information on characteristics which could yield information on the holdings. The regional statistical offices give a "non-recurring" number to every new holding and store it in the register for the duration of the holding's existence,
- the forename and surname, name of company, institution or authority, address and telephone number of the holders or managers,
- the holding headquarters and the regional codes,
- the type of holding,
- the legal status of the holder,
- the type of survey units without holding characteristics,
- the utilised agricultural area,
- woodland,

- the economic activity, the type of goods produced, the annual quantity of raw wood felled and the number of persons employed,
- participation in agricultural statistics surveys,
- the date of entry in the register.

1.3 Register management

The rapid economic changes in agriculture mean that the holdings and their characteristics have to be constantly checked and updated. The basis of sound register management is therefore the **inclusion** of new holdings, the **alteration** of existing data and the **deletion** of data in the case of holdings which no longer exist.

Information on changes in the characteristics (the holder, area, location of the holding, etc.) of holdings already in existence is mainly taken from the exhaustive agricultural statistics surveys. After the questionnaires have been checked for completeness in the regional statistical office, the characteristics in the register are brought up to date on the basis of the information in these questionnaires.

Information on **newly created** holdings is mainly gathered in the course of agricultural surveys by survey organisers who are familiar with the situation in the field. Major problems in recording new holdings have appeared for the first time in the new *Länder*. With the help of local authorities, the owners of holdings which have been discontinued are asked in the land use survey to state the persons to whom they have sold or rented land. The new holdings identified in this way have been given a number and recorded on the register tape.

Lastly, the data entry for a holding in the register must be **deleted** if it is below the coverage threshold for any of the agricultural statistics series which use the holding register or if it has ceased to exist. However, deletion does not need to be carried out immediately, but it should comply with the deadlines laid down in the Agricultural Statistics Law.

2. Progress of the survey

2.1 Preparation of the survey

The Federal Statistical Office is responsible for the methodological, technical and organisational preparation of the surveys. This basically means the design of the questionnaire, the development of tabular programmes, the specification and programming of the programmes used in the Regional statistical offices and in the Federal Statistical Office itself and the preparation of the processing documents (programme documentation, data flow charts, data record descriptions, etc.).

2.1.1 Questionnaires

The Federal Statistical Office first makes a preliminary draft of the questionnaire. This draft is sent to the Ministry for Food, Agriculture and Forestry and the regional statistical offices for their opinion. Ideas and proposals for changes from these authorities are incorporated by the Federal Statistical Office in the next draft. Finally, the revised draft is submitted to the working party which meets at regular intervals in the Federal Statistical Office and is then adopted in its final form. A single national type copy is then produced in the Federal Statistical Office and this is sent to the printing works which have been commissioned with the printing of the questionnaires. When the print run is completed, the questionnaires are sent to those regional statistical offices which have participated in the joint printing process. Those offices which are not so involved are responsible themselves for producing the questionnaires.

2.1.2 Development of the tabular programmes

As with the design of the questionnaires, the Federal Statistical Office draws up the tabular programme and discusses this with the Ministry for Food, Agriculture and Forestry and the regional statistical offices until it is available in definitive form.

2.1.3 Production of the data processing programs

The specifications for the national programs to be implemented in the regional statistical offices are drawn up by the special agricultural department of the Federal Statistical Office. The programming takes place in the Federal Statistical Office or in one of the regional offices of the as part of a combined programming procedure. After the programs have been tested, they are approved for dispatch (with the documentation) to the regional statistical offices.

2.2 Conduct of the survey in the field

The main survey on land use, the farm labour force survey and the agricultural report are carried out in May of the year in question. The livestock census is carried out in December of the previous year.

After the regional statistical offices have identified the holdings to be covered with the aid of the holding register and the questionnaires have been addressed and sent to the communes, the latter become responsible for carrying out the survey. The date of the survey is announced officially. In the case of extensive surveys, such as the agricultural census, the individual *Länder* normally use enumerators; these may be civil servants from the commune or volunteers. They are used to reduce the burden on the respondents and are intended to help them in answering the questions. However, the respondent may also enter the information on the form himself. He may then give the form to the interviewer or hand it in a sealed envelope to the survey authority or send it off to the survey authority within one week. Surveys which are not so extensive (livestock census, main survey on land use) are mainly carried out by post. It is not possible to generalise about the conduct of the survey as this varies greatly from one region to another.

Before the survey is conducted, the enumerators and other authorities responsible for carrying out the survey participate in training seminars which are carried out in each region.

As part of the publicity campaign, the technical journals and other media at regional level, as well as farming federations and specialist bodies, inform farmers of the scope and date of the survey.

In accordance with § 93 of the Agricultural Statistics Law, all holders or managers of the holdings included in the survey must provide information. In accordance with § 23 of the Federal Statistics Law, refusal to do so is an infringement of the law and can carry a fine of up to DM 10 000. During the training sessions the enumerators are expressly instructed to those refusing to respond of the legal binding obligation.

When the survey has been completed in the field, the questionnaires are sent to the respective regional statistical offices.

2.3 Plausibility checking and compiling of the tabular results

The characteristics surveyed go through a complicated checking procedure in the regional statistical offices. First of all, there is a manual check on input and completeness. The data are then inputted, transferred to a magnetic data medium and aggregated at holding level using the holding number from the various surveys (main survey on land use, livestock census, farm labour force survey, agricultural report). There is then a machine plausibility check (approximately 600 error keys). Only then are the tabular results produced. After manual inter-table and intra-table plausibility checks, these results are sent by the regional statistical offices to the Federal Statistical Office. The latter produces the country result and publishes - with due regard for confidentiality - the full scale results for the country and the regions in accordance with the rules established between the Federal Statistical Office and the regional statistical offices. The latter in turn publish the results at regional, county and commune level.

In accordance with an agreement between the statistical offices, the sample survey results of the agricultural survey are only published in thousands to one decimal place. Exhaustive results are published to full figures.

2.4 Structure of the agricultural report/census

A summary of the structure and organisation of the agricultural report/census is given in Fig. 4.

As already described in detail in Chapter II, the agricultural report/census consists of a

- a) basic programme
- b) supplementary programme and
- c) additional programme.

The **basic programme** aggregates the data from the main survey on land use, the livestock census and the farm labour force survey at holding level using the random number given to each holding.

The **characteristics of the livestock census** are surveyed in December using the relevant survey form. In May the **characteristics of land use** are also surveyed using a special questionnaire of the main land use survey.

On the other hand, the **information on the farm labour force** and the **supplementary programme of the agricultural report** is collected in May (characteristics covering accounts, socio-economic conditions of the holding, volume and utilisation of animal excrement, the type of tenure, other gainful activities sources of income and ownership or use of agricultural machines), as well as the characteristics specially surveyed for the **agricultural census** (reference quantities in accordance with the milk quantity guarantee regulation, letting of accommodation to holiday or spa guests, succession to the holding, type and economic branch of other gainful activity, vocational training, membership in producer co-operatives and associations), with a common form being used for all. There are actually two forms (forms S and N). Form S is sent to all sample holdings whereas form N is sent to all those not included in the sample. All the characteristics exhaustively surveyed are covered on both forms. In addition, form S also includes the representative characteristics for the selected sample holdings.

TABLE 4: OVERVIEW OF THE BREAKDOWN OF AGRICULTURAL REPORTS/AGRICULTURAL CENSUSES

SURVEY	LIVESTOCK CENSUS	MAIN SURVEY ON LAND USE	FARM LABOUR FORCE SURVEY	AGRICULTURAL REPORT (AGRARBERICHTERSTATTUNG)/ AGRICULTURAL CENSUS	
SURVEY FORM	LIVESTOCK CENSUS DECEMBER 1990	MAIN SURVEY ON LAND USE MAY 1991	FORMS S AND N IN THE YEAR OF THE FARM SURVEY FORM S IN THE OTHER YEARS	FORM S	FORM N
ITEMS COVERED	<p>Number of</p> <ul style="list-style-type: none"> - bovine animals - pigs - sheeps - horses - poultry 	<p>type of land use</p> <ul style="list-style-type: none"> - arable land - winter wheat - spring wheat - durum wheat - kitchen gardens - fruit plantations - nurseries - permanent pasture and meadows <ul style="list-style-type: none"> - permanent pastures - mowing meadows - permanent meadows - rough grazing - vineyards - osier-willows - utilized agricultural area 	<ul style="list-style-type: none"> - holder and members of holder's family - non-family labour on the holding 	<ul style="list-style-type: none"> - type of tenure, rents (AS) - socio-economic conditions (AS) - type and economic branch of other gainful activities - succession to the holding - accounts (AS) - letting of accommodation - milk reference quantity - solid dung and slurry - first rent in the past two years - social security - other gainful activities and sources of income (AS) - income from other gainful activity (AS) - vocational training - producer cooperatives and associations - tractors, machinery and milking machinery (AS) 	<ul style="list-style-type: none"> - type of tenure, rents (AS) - socio-economic conditions (AS) - type and economic branch of other gainful activities - succession to the holding - accounts (AS) - letting of accommodation - milk reference quantity - solid dung and slurry

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

The regional statistical offices are responsible for ensuring the statistical confidentiality of the tabular results they publish. The Federal Statistical Office is responsible for the tabular results it publishes. There is not yet a standard procedure for handling confidential data so that the rules in the Federal Statistical Office and the regional statistical office vary considerably.

The application of confidentiality procedures to tabular results is intended to prevent individual data from being "retropolated" from aggregated data with a **reasonable degree of effort**. Normally, a distinction is made between **primary and secondary confidentiality**.

Primary confidentiality covers:

- cells containing few data items (less than 3 holdings)
- cases of dominance (cell dominated by 1 or 2 holdings)

Secondary confidentiality covers:

- the possibility of deriving the confidential value of a cell using the subtraction method.

Before publishing the tabular results, the Federal Statistical Office normally suppresses, manually, all cells with fewer than 3 holdings. Sample results are only published in thousands to one decimal place (characteristic values and holdings) so that no cells occur with one or two holdings. Cells showing dominance are not suppressed. Finally, all tables are manually checked to see whether the value of one cell, that has been rounded for reasons of confidentiality, can be derived by the subtraction method from the total. If this is the case, a further cell is suppressed manually.

VIII. NATIONAL DIFFERENCES

The programme for the EC structure surveys from 1988 to 1997 is already completely integrated into the national surveys (agricultural reports/agricultural census). It is virtually identical with these two national surveys, although these exceed the EC programme in some areas. However the characteristics covered by the agricultural report/agricultural census form the basis for the results presented by Eurostat in the table schedule of the EC structure surveys for Germany.

1. Survey and observation field

All agricultural holdings belong to the survey and observation field of the EC structure surveys. The agricultural census and the exhaustive part of the agricultural report are more extensive than the EC survey and observation field and cover both agriculture and forestry holdings. By contrast, in the sample part of the agricultural report, i.e. that part carried out by sample, only data on the agricultural holdings are collected and represented.

2. Legal status and management of holding

In Germany holdings in the hands of *natural persons* include:

- * any individual,
- * certain groups of individuals: spouses, siblings, co-heirs,
- * civil law companies, *de facto* associations, general partnerships, limited partnerships or

similar associations of individuals;

Holdings in the hands of *legal persons* include:

- * under private law: registered co-operative societies, registered associations, commerce associations, registered associations with limited liability, joint stock companies, foundations incorporated under private law,
- * under public law:
 - ** churches, religious and similar institutions or foundations incorporated under public law;
 - ** central, regional and local authorities: federations, *Land* (region) district, municipality, association of regions, districts or municipalities.

3. Typology for agricultural holdings

Apart from the Community typology for agricultural holdings, Germany also uses a typology exclusively for national purposes.

It is not possible to compare the results of the EC structure survey of 1989 with those of the agricultural report owing to the different typology schemes and methodology.

4. Annual work units (AWU) - Labour force units (LFU)

Apart from the annual work units (AWU) used in the EC structure survey to measure the work performance of one person occupied full time in agriculture, Germany also uses the labour force unit (LFU) (Arbeitskräfteeinheit - AKE) for national purposes.

The labour input on the holding is determined for national purposes for the holder, his spouse, other members of the holder's family and the non-family labour. It is calculated on the basis of the number of working weeks in April and the number of working hours per week recorded on the survey form for each work unit in the holding. Family labour and regularly employed non-family labour are considered to be working full-time if they worked 42 (family labour force) or 40 (non-family labour regularly employed) hours or more in each of the four weeks in April.

Unlike the calculation of AWU, the LFU is corrected for national purposes in accordance with age. The labour input of a person in full-time employment is evaluated as follows:

- 1.0 LFU: age 16 to 65,
- 0.5 LFU: age 15,
- 0.3 LFU: age 65 and above.

Such a deduction is not made for holders and non-family labour regularly employed who are 65 years or older.

5. Survey characteristics and special features

In Germany additional characteristics are covered to meet national requirements. These are:

- areas rented and rents
- membership in social security systems and whether receiving payments for ceasing production
- type and economic branch of other gainful activities of the holder and his spouse

- succession to the holding
- letting of accommodation to holiday or spa guests, letting of camping sites
- milk reference quantity under the milk quantity guarantee regulation
- solid dung and slurry (utilisation of slurry on own or other holding's land)
- membership in agricultural producer co-operatives, producer associations.

On the other hand however, characteristics which are included in the list of characteristics for the EC structure survey are not covered, since they do not exist or are optional.

IX. LESS FAVOURED AREAS AND MOUNTAIN AREAS

1. Legal bases

The basis for defining disadvantaged areas in Germany is:

- the Council Directive of 28 April 1975 on mountain and hill farming in certain less-favoured areas (75/268/EEC),
- Council Regulation of 12 March 1985 to increase the efficiency of the agricultural structure (797/85/EEC),
- Council Directive of 14 July 1986 on the Community index of less-favoured areas - Germany - (86/465/EEC), - amended Council Directive of 23 October 1989 (89/586/EEC)

2. Delimitation and grouping of areas

Mountain areas

These consist of municipalities or parts of municipalities characterised by

- difficult climatic conditions owing to altitude,
- sharp gradient of the major portion of the land at lower altitudes, or
- both the above.

Accordingly, in Germany communes or parts of communes are considered as mountain areas which are

- at an altitude of not less than 800 metres (centre of the locality or average altitude of the commune), or
- at an altitude of at least 600 metres, together with a gradient of 18% and over, on most of the commune's area.

Less favoured agricultural areas

This category is characterised

- by low soil fertility, mainly suitable for extensive livestock keeping,
- below-average economic conditions for agriculture

and

- a relatively low population density.

Basically these are the same as the former demarcation of "areas disadvantaged by nature" in Germany.

The less favoured agricultural areas consist of enclosed contiguous areas which must fulfil the following criteria:

- upper limit of the agricultural comparability index (landwirtschaftliche Vergleichzahl - LVZ) as a weighted average
 - a) in the areas which existed up to 1986 and the additional contiguous areas introduced on 21.07.1986
=25
 - b) in the contiguous areas formed on 21.07.1986 and the additional areas introduced on 09.11.1989
=28
 - c) in contiguous areas comprising communes with a permanent pasture area of 80% or more of the agricultural area
=32.5

Small areas

These are areas affected by specific handicaps which influence agricultural gainful activity unfavourably but where farming must be continued to protect the environment, to conserve the countryside and preserve the tourist potential or to protect coastal areas.

In principle these areas may not exceed a weighted average of 25 LVZ.

The Federal Ministry for Food, Agriculture and Forestry draws up, in collaboration with the Agricultural Ministries of the *Länder*, an directory of communes and their allocation to the less favoured areas. The bases for this allocation are as given above. On the basis of this index the regional statistical offices allocate a code to each holding in the register; the code is based on the location of the holding.

X. PUBLICATIONS

The results of the agricultural report which are published every two years by the Federal Statistical Office appear in series 3: Agriculture and Forestry, Fisheries:

- Series 2.1.2 Land use on holdings
- Series 2.1.3 Livestock on holdings
- Series 2.1.4 Management systems and standard income of the holding
- Series 2.1.5 Socio-economic conditions
- Series 2.1.6 Types of tenure in agricultural holdings
- Series 2.1.7 Non-holding income and working conditions for selected holding groups

GREECE

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I. INTRODUCTION

In Greece, surveys on the structure of agricultural holdings are carried out as full or sample surveys. Every ten years or so, an exhaustive census of agriculture and livestock is carried out (1950, 1961, 1971, 1981 and 1991). The 1991 Community survey of the structure of agricultural holdings (exhaustive) was carried out at the same time as the national census of agriculture and livestock.

As part of the Community programme on the structure of agricultural holdings, a sample survey was carried out in Greece in 1966/67 for the first time. The next survey, also a sample survey, was carried out in 1977/78. Since Greece's accession to the European Community, surveys of agricultural and livestock holdings (1983, 1985, 1987, 1989, 1991 etc.) have been carried out at the same intervals as the Community surveys.

For the 1966/67, 1977/78, 1987, 1989 and 1993 structure surveys, a 10% sample was used. For the 1983 and 1985 structure surveys, the sample was just 5%. The 1991 basic survey was exhaustive.

II. PERIODICITY AND REPORTING PERIOD/DATE

Following Greece's accession to the European Community on 1 January 1981, it was obliged in 1983 to take part in the Community structure survey for the first time. Since 1983, the surveys of agricultural and livestock holdings have been carried out every other year as a sample survey. A full census of agriculture is carried out about every ten years.

The reporting period is September to December of the following year.

The reporting date for characteristics relating to livestock and private machinery is 30 September of year (n). The reporting period for characteristics relating to land use, machinery (collectively owned or owned by cooperatives or other enterprises) and labour force (family members, labour employed on a regular or seasonal basis) is 1 October of the previous year (n-1) to 30 September of year (n).

III. SCOPE OF THE SURVEY

Survey units are holdings

- a) with a utilized agricultural area (UAA) of at least one stremma (0.1 hectare). Utilized agricultural area includes arable land, kitchen gardens, permanent grassland and permanent crops.
- b) with a utilized agricultural area of less than one stremma (0.1 hectare), provided that, on 30 September of the survey year, at least one cow or two head of other large livestock or five head of small livestock (sheep, goats or pigs) or more than 50 head of poultry, or more than 20 beehives are kept.

Holdings are economic units that are subject to uniform management and produce agricultural products.

The survey covers holdings whose managers are permanently resident on the holding, even if temporarily absent.

The survey does not include holdings

- which are devoted entirely to forestry,
- which are located on uncultivated or other land,
- which contain animals that are not used for farm work and do not produce agricultural products.

Details of leased land are given by the lease holder, not the owner.

IV. SAMPLING PLAN

As the 1991 agricultural census in Greece was exhaustive, a sampling plan was not needed.

V. ORGANIZATION AND CONDUCT OF THE SURVEY

1. Register of holdings

1.1 Characteristics to be included in the register of holdings

The following characteristics were included in the register of holdings:

- holding's permanent serial number,
- first and family names, address and telephone number, year of birth, ID number and tax number of the owner or manager of the holding;
- code for the regional allocation of the holding and
- holding characteristics.

1.2 Management of the register

Rapid economic changes in agriculture call for continuous checking and updating of the holdings recorded in the register, together with their characteristics. Proper management of the register thus involves recording newly created holdings, amending existing data and deleting data sets for holdings that no longer exist.

2. Survey progress

2.1 Preparation of the survey

The Division for the Structure of Agricultural and Livestock Holdings (attached to the Directorate for the Primary Sector) has sole responsibility for preparing the survey and all the relevant technical details. Methodological planning is the responsibility of the "Methodology" division, whilst the compilation of documents with personal data is done by the "Informatics" division after checking and approval by the Directorate for the Primary Sector. The latter is likewise responsible for releasing the tabular database tables compiled for Eurofarm.

2.1.1 Questionnaire

First, experienced staff produce a draft questionnaire containing all characteristics to be recorded pursuant to Council Regulation (EEC) No 571/88 of 29 February 1988 as last amended by Commission Decision (94/677/EC) of 6 October 1994 as regards Community surveys on the structure of agricultural holdings. This draft is then discussed with the "Methodology" and

"Informatics" divisions, as well as with staff from the statistical services of the districts, and a final version of the questionnaire produced.

2.1.2 Development of tabular programs

The tables for presenting results are planned at national level by the Directorate for the Primary Sector. The programs are then adapted for the tabular presentation of data by the "Informatics" division on the basis of the planned questionnaire.

2.2 Conduct of the survey in the field

Once the final version of the questionnaire had been approved, questionnaires are sent to the statistical services of the districts together with instructions for enumerators.

Questionnaires are filled in by enumerators and, where necessary, statistical staff from the statistical services of the districts. This is done in the field by means of a visit to the holding and a personal interview with the head of holding. Those involved in the survey first attend regional meetings organized by the "Structure of agricultural and livestock holdings" division (Directorate for the Primary Sector).

At the same time, the municipal secretaries are informed of the conduct of the survey by the statistical services of the districts. These secretaries are chiefly involved as statistical enumerators.

Replies to the questionnaires are treated as confidential. Respondents are required to supply information in accordance with Decree-Law 3627/56.

The heads of the statistical services of the districts are responsible for collecting the questionnaires, after which input checks are carried out (completeness, plausibility). Survey data are then input into PCs and plausibility checks carried out.

2.3 Plausibility checks and compilation of tabular results

During the 1993 survey, input, completeness and plausibility checks were carried out on questionnaires on a decentralized basis by staff from the nomós statistical services familiar with local conditions.

The staff concerned were given training at the NSSG headquarters in the program to be used (RODE PC). This covered the following:

- a) data input;
- b) two-stage checking of data based on the handbook for data-processing checks compiled by the Directorate for the Primary Sector in association with the informatics division;
- c) transfer of the corrected material to data carriers, and dispatch to the central service.

Once the diskettes had been sent to the "Structure of agricultural and livestock holdings" division, and prior to the tabulation of results, the relevant department made a comparison check with the two previous surveys.

Tabulation of results is done for Greece as a whole, the geographical areas, the 13 regions and at district level, mountainous and less-favoured areas being listed separately. Results are rounded prior to publication.

VI. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

Data on individual holdings are transmitted anonymously to the Statistical Office of the European Communities, making it impossible to identify holdings directly.

VII. NATIONAL DIFFERENCES

1. Classification procedure

In order to satisfy national requirements, holdings are recorded by type of farming and economic size (in accordance with Commission Decision 85/377/EEC).

2. Annual work units (AWU)

In Greece, the work output of an individual engaged full time in agricultural activities on an agricultural holding is measured using the annual work unit (AWU). Full-time is deemed to be 8 hours per day and 275 working days per year. The annual work unit is calculated by dividing the number of days actually worked by 275. For persons employed in agriculture, an age-related deduction is made.

Annual work units for persons employed in agriculture are calculated using the following table:

Working time classes (in AWU)	Size-classes by working days	Coefficient
0 to < 25	1 to 68	0.125 AWU
25 to < 50	69 to 137	0.375 AWU
50 to < 75	138 to 206	0.675 AWU
75 to < 100	207 to 274	0.875 AWU
100	275 or more	1.000 AWU

3. Survey characteristics and special features

In Greece, additional characteristics are recorded to meet national requirements. These are as follows:

- Other rabbits: all rabbits are recorded, except female rabbits that have already had young.
- Composition of the household of the agricultural holding and the employment of its members.

This section is completed for all members of the household, regardless of their age and whether they are present or temporarily absent during the survey reporting period.

- In order to calculate employment, the number of working days worked by the head of holding and members of his family aged over 10 are recorded per quarter. The basic requirement is that they were engaged in agricultural work on the holding.
- Seasonal labour engaged in agricultural work on the holding.

This question concerns seasonal workers over the age of 15 that are employed on the holding. Unpaid work done by neighbours or by family members is also recorded.

For seasonal workers and regularly paid workers, the number of working days per quarter is recorded.

VIII. LESS-FAVOURED AND MOUNTAINOUS AREAS

1. Legal basis

- Council Directive of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas (75/268/EEC).
- Council Directive of 20 July 1981 concerning the Community list of less-favoured farming areas within the meaning of Directive 75/268/EEC (81/645/EEC).
- Council Directive of 29 January 1985 amending Council Directive 81/645/EEC on the Community list of less-favoured farming areas within the meaning of Directive 75/268/EEC (85/148/EEC).
- Council Regulation (EEC) No 797/85 of 12 March 1985 on improving the efficiency of agricultural structures.

2. Delimitation and grouping of territorial units

Mountainous areas

Areas which, for the following reasons, are deemed to be severely limited in respect of land-use potential:

- unfavourable climatic conditions due to altitude;
- major differences of altitude over much of the area, even at lower altitudes;
- both the above.

More specifically, areas are deemed to be mountainous on the basis of purely topographical criteria, not from an economic point of view, if the following apply:

- a) the area is more than 800 m above sea level;
- b) the difference in altitude within a particular area is at least 400 m.

Less-favoured areas

Areas characterized as follows:

- a) limited land yield, unfit for cultivation, only suitable for grazing animals;
- b) below-average economic potential due to low potential yield;
- c) low population density or tendency to depopulation.

IX. PUBLICATIONS

Survey data are made available to all NSSG users in the form of specially created tables. Data are also given in summarized form in special publications.

SPAIN

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I. INTRODUCTION

In Spain, initial experience with general farm structure surveys was acquired as part of the first census of agriculture in 1962. Other agricultural censuses followed in 1972, 1982 and 1989. The 1989 agricultural census was based on Council Regulation (EEC) No 571/88 on the organization of Community surveys, and on the FAO recommendations on a worldwide agricultural survey.

After Spain's accession to the European Community on 1 January 1986, it was obliged as a full member to participate in 1987 for the first time in a Community survey on the structure of agricultural holdings.

II. LEGAL BASIS

Article 45(2) of Law 12/1989 of 9 May 1989 on Government Statistics stipulates, with regard to relations with the European Community and international bodies, that statistics to be compiled in accordance with European Community provisions will automatically be incorporated into the national statistical plan.

The 1993-96 national statistical plan was approved by Royal Decree No 136 of 29 January 1993. It lays down statistical measures in the agricultural field, together with data on two subsectors - stockrearing and forestry.

Provision is made for the following measures at national level:

- A. Agricultural census: full survey every ten years (most recent: 1989).
- B. Surveys on the structure of agricultural holdings: sample survey at two-yearly intervals (1993, 1995 and 1997).

III. PERIODICITY AND REPORTING PERIOD

The structure survey is carried out every other year as a sample survey during the last quarter of the year (1 October to 31 December).

The reporting period for the characteristics on land use, farm labour force and machinery is 1 October of the previous year to 30 September of the following year. The reference date for livestock characteristics is the day of the survey.

IV. SCOPE OF SURVEY

The survey units are agricultural holdings

- with a utilized agricultural area (UAA) of at least 1 hectare;
- with a utilized agricultural area (UAA) of at least 0.2 hectares for the cultivation of vegetables and flowers, crops under glass, irrigated fruit or nurseries;
- which the 1989 agricultural census showed to have one or more animal units (AU) with a total standard gross margin of 0.75 European Size Units (ESU) or more.

These three criteria are to be considered independently of each other, i.e. at least one criterion must be met for the agricultural holding to be included in the basic population.

Forestry holdings are not included in the survey if they do not meet the above criteria, as the survey relates to purely agricultural holdings. However, if the holding under investigation includes wooded areas, it is obviously included in the survey.

The agricultural holding is an economic unit that is subject to uniform management and produces agricultural products. This technical unit is generally characterized by common means of production, such as labour and machinery.

Special cases:

A holding is deemed to be agricultural

- if it is subject to uniform management and is an economic unit,
- if it is divided up between several people for tax or other reasons,
- if two or more formerly independent holdings have been brought together under one head of holding, and
- if holdings in different districts are managed by one and the same head of holding.

The holding is also deemed to include agricultural land which, even if not farmed during the reference period, remains available for agricultural purposes. Uncultivated areas are likewise recorded, even if they are used exclusively for hunting purposes (reserves).

The following are not deemed to be agricultural holdings:

- riding and racing stables,
- kennels,
- cattle dealers, abattoirs and the like (where livestock is not kept),
- holdings with draught and working animals, where the holding is not a breeding establishment,
- zoos, fur farms and livestock breeding establishments, breeding establishments for dogs, cats and ornamental birds,
- plots of land that have already been developed on the census day, or on which development work has already begun,
- enterprises providing agricultural services.

For survey purposes, an agricultural holding is allocated to the municipality in which the bulk of the cultivated land lies or, in borderline cases, the municipality in which the agricultural holding's only or principal building lies.

The survey covers the whole of Spanish territory, i.e. mainland Spain, the Balearic islands, the Canary islands, Ceuta and Melilla.

V. SAMPLING PLAN

The 1989 agricultural census was carried out as a full survey in Spain.

VI. ORGANIZATION AND CONDUCT OF THE SURVEY

1. Register of holdings

1.1 Object of the register

The plan is to compile a register of agricultural holdings in Spain that will serve as a basis for carrying out the surveys.

As there has not hitherto been a register of holdings for the structure surveys, use was always made of data files on individual holdings from the last census. These are primarily used

- for determining and checking the survey units to be used for individual areas of agricultural statistics,
- for selecting the sample,
- for marking and sending off the survey documents and
- for checking information recorded during the survey,
- for reducing the response burden generated by agricultural statistics.

1.2 Characteristics to be recorded in the register of holdings

The data files contain the following:

a) General data

- * municipality code,
- * province code,
- * serial number of questionnaire,
- * stratum number, and
- * number of branch of activity.

b) Data on head of holding

- * First and family names, firm, name of institute or authority, address and phone number
- * the municipality in which the main residence is located.

c) Data on the holding:

- * total area,
- * utilized agricultural area (UAA),
- * land-use characteristics,
- * livestock characteristics,
- * interchangeability of holding,
- * secondary activities,
- * transfer or purchase of land, and
- * comments.

1.3 Management of register

The register of holdings for the 1993 structural survey was updated using data from the 1989 structure survey.

2. Survey stages

2.1 Preparation of the survey

The National Statistical Institute (INE) is responsible for the methodology and organization of the survey in terms of planning, the questionnaire, enumeration instructions, training videos, compilation of programs for processing and analysing data, and compilation of the tabular programs.

2.1.1 Questionnaires

The INE is responsible for producing a first draft of the questionnaire, which is then forwarded to the Ministry for Agriculture, Fisheries and Food (MAPA), the Interministerial Statistical Committee, the Interterritorial Statistical Committee, the autonomous communities and, finally, the provincial delegations of the INE for their reactions and proposed amendments.

Once proposed changes have been received, the definitive version of the questionnaire is drawn up, presented to the working party specially set up for the survey, and then printed.

2.1.2 Development of tabular programs

The INE is responsible for drawing up the tabular programs.

2.1.3 Production of computer programs

The INE is responsible for table specifications and their programming in conjunction with the agricultural statistics and data processing sections.

2.2 Conduct of the survey in the field

It is the job of the INE provincial authorities to collect data for the survey on the structure of agricultural holdings. Qualified statisticians are responsible for running the survey as a whole. Temporary staff are employed as field enumerators.

The following staff are available to the provincial authorities for carrying out the survey: a qualified statistician, who is responsible for the overall running of the survey and its technical side, ultimate responsibility for data collection lying with the head of the provincial authorities. The latter also have at their disposal a group of enumerators (temporary where necessary). They are responsible for conducting the survey in the field, and for filling in the questionnaires. An inspector supervises the enumerators' work, helps solve problems, and assists the statistician responsible for the survey when this is deemed advisable for its smooth running.

Respondents are given advance notice in writing of the date they will be visited by the enumerator. Each week, only a limited number of appointments for visits are sent out, thus ensuring a reasonable pace of work during the period allotted to the municipalities for recording data. The notice contains the exact date of the visit, so respondents can give the authorities the necessary data by phone should they be unable to meet the enumerator on the specified date.

The enumerators carry out the visits on the specified days and ask for the data needed to fill in the questionnaires. Before the visit is over, the enumerator checks to see that the questionnaires are complete and the data plausible.

Respondents that could not be seen on the specified date are sent another date and reminded of the importance of their cooperating in this survey.

The qualified statistician in charge of the survey as a whole is responsible for the following: directing and monitoring all survey-related work such as the checking and preparation of the survey material as a whole, conducting further training courses for enumerators, organizing individual work stages, drawing up a visiting plan, helping interviewers solve problems, and, where necessary, carrying out spot checks, checking and analysing the data supplied and overseeing the individual phases of the survey, thus ensuring that data collection is correct and completed within the predefined deadline, and that the results are of the requisite quality.

The completed questionnaires are checked for errors. The enumerator looks through the questionnaires a first time before forwarding them to the inspector.

The inspector looks through all the questionnaires and corrects any anomalies he discovers. He asks the enumerator to contact the respondent again if this is deemed advisable because data are missing or some data need checking.

Whilst data are being collected, the qualified statistician in charge of the survey reports back to the central statistical service every two weeks on the progress of work.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

Both individual and tabular data are subject to confidentiality in accordance with Section III of Law 12/1989 on Government Statistics.

VIII. NATIONAL DIFFERENCES

1. Scope of the survey

The scope of the survey coincides with that of Community structure surveys, and thus excludes holdings devoted entirely to forestry as well as those that lie below the relevant threshold for Community surveys.

2. Legal form and management of holdings

In Spain,

holdings owned by natural persons include the following:

- * Individuals.
- * Groups of individuals (brothers and sisters, joint beneficiaries under a will or intestacy, etc.) that jointly run a holding or combination of arable land or livestock units without having formally founded a company or association.

If, on a given agricultural holding, two or more individuals act as owners of the holding, only one person is identified as the manager, according to the following criteria:

the person who runs the holding or makes the greatest contribution to its running,

the person who assumes the bulk of responsibility for financial and economic matters,

the oldest person.

holdings owned by legal persons include the following:

- * **Companies**
A group of persons whose articles of association have been drawn up and certified by a notary and appear in the trade register. These may be public limited companies, companies with limited liability, general or limited partnerships.
- * **Public undertakings**
In this case, the holding is run by central, regional or local government.
- * **Production cooperatives**
These are associations that are subject to the principles and provisions of general cooperative law (and associated development standards) and that produce agricultural products as a joint undertaking.
- * **Other legal status**
Includes all legal persons not mentioned above, e.g. Sociedades Agrarias de Transformación (Agricultural processing companies, SAT).

3. Classification procedure

In Spain, the Community classification procedure is used for national purposes.

4. Annual Work Units (AWU)

The questionnaire asks about the hours worked by family labour and regular non-family labour, according to five classes. For non-family labour employed on a non-regular basis, use is made of five classes based on working days.

Data on work done on the holding are calculated in terms of the number of days worked full or part-time, i.e. in annual work units. An AWU corresponds to the work done during the course of a year by a single person employed full-time.

Farm labour includes all persons from the end of compulsory schooling.

Table 1 gives annual work units for family labour and regular non-family labour.

Table 1: Calculation of annual work units (AWU)

% share	Hours worked on agricultural holding per year	Working days	Annual Work Units (AWU)
> 0 % to 25 %	> 0 to < 456	> 0 to <57	> 0 to 0,250
25 % to < 50 %	456 to < 912	57 to < 114	0,250 to < 0,500
50 % to <75 %	912 to <1369	114 to <171	0,500 to <0,750
75 % to < 100 %	1369 to < 1826	171 to < 228	0,750 to < 1,000
100 %	1826 and more	228 and more	1,000

5. Survey characteristics and particularities

All characteristics from the list of characteristics for the Community structure survey are recorded, with the following exceptions:

C/04: In Spain, the characteristic "Number of plots" refers to the total area of the holding, not the utilized agricultural area.

J/14: The characteristic "Table fowl" also includes breeding cocks for laying hens, which do not come under laying hens (J/15).

IX. LESS-FAVOURED AND MOUNTAINOUS REGIONS

1. Legal basis

The following are used as a basis for determining disadvantaged regions in Spain:

- Council Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas.
- Council Regulation (EEC) 797/85 of 12 March 1985 on improving the efficiency of agricultural structures,
- Council Regulation (EEC) 86/465 of 14 July 1986 concerning the Community list of less-favoured areas and the Council's amending Directive 89/586/EEC of 23 October 1989.

2. Delimitation and grouping of territorial units

MAPA provides a list of all municipalities showing the territorial code and name of the municipality.

The territorial codes for individual holdings are as follows:

0. Holdings total.
1. Less-favoured areas.
2. Mountainous areas.

X. PUBLICATIONS

Results appear in the following publications:

- National Results (one volume),
- Results for the individual autonomous regions (17 volumes in total, one per autonomous region).

FRANCE

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- III. PERIODICITY
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- V. SAMPLE PLAN
 - 1. Stratification
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- VI. ORGANISATION AND EXECUTION OF SURVEYS
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 - 2. Legal basis and management of holdings
 - 3. Crops
 - 4. Annual work units (AWUs)
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- X. PUBLICATIONS

I. INTRODUCTION

In France, agricultural statistics have been the responsibility of the Ministry of Agriculture since it was established in 1881. Major ten-year surveys were carried out in 1882, 1892 and 1929.

The agricultural census of 1955 was followed in 1961 by the establishment, within the Ministry of Agriculture, of a "central department for statistical surveys and studies" with wide-ranging powers, which went on to become the Central Office for Statistical Surveys and Studies (Service Central des Enquêtes et Etudes Statistiques - SCEES).

A national survey on the structure of agricultural holdings was carried out in 1963 using a 10% sample. From 1965-66 onwards, a programme of surveys was gradually developed, in which the Community directives played an increasingly important role.

In France the national surveys on the structure of agricultural holdings (1987, 1990, 1993, 1995, ...) were carried out with the same periodicity as the Community surveys. In principle, the surveys on the structure of agricultural holdings, conducted generally every two years, are identical to the agricultural censuses. In contrast to the survey on the structure of agricultural holdings, which is carried out as a sample survey, the agricultural census is conducted at approximately 10-year intervals (1979, 1988) as an exhaustive survey. However, for the 1988 basic survey France only transmitted a sample to Eurostat in the form of individual data (covering approx. 140 000 holdings). The scope of the sample for the 1990 structural survey was approximately 70 000 holdings (about every seventh holding).

Under the programme of Community surveys, surveys of the cattle population (in July and in December), the pig population (in April, August and December) and the sheep and goat population (in December) are conducted each year.

Table 1: Livestock survey programme

Reference date	Characteristics	Survey type F = exhaustive survey S = sample survey	Periodicity
April	Pigs	S	Annual
August	Pigs	S	Annual
December	Pigs	S	Annual
July	Cattle	S	Annual
December	Cattle	S	Annual
December	Sheep	S	Annual

II. LEGAL BASIS

Council Regulation (EEC) No 571/88 of 29 February 1988 on the organisation of Community surveys on the structure of agricultural holdings in the period 1988-97 is the legal basis at Community level. At national level, the surveys are subject to the approval of the Statistical Surveys Co-ordinating Committee of the Institut National de la Statistique et des Etudes Economiques (INSEE) set up in 1951. This body establishes an annual programme of statistical surveys and grants or withholds approval for planned surveys. There is an obligation on respondents to participate in the survey, but in return they are guaranteed that individual data will remain secret (Law No 51-711 of 7 June 1951, amended, on obligation, co-ordination and secrecy in statistical matters).

Law No 78-17 of 6 January 1978 on information technology, files and freedom of information applies to surveys of natural persons. In the case of agricultural surveys, persons wishing to exercise this right may apply to the SCEES.

Under the terms of this legislation, approval for each survey coming under the scope of the Law must be sought from the Commission Nationale de l'Informatique et des Libertés (CNIL - National Commission for Information Technology and Freedom of Information).

The CNIL authorises the automatic processing of data under the following conditions:

- processing must be for the sole purpose of statistical study
- the agency responsible for providing right of access is the SCEES
- personal data may only be stored subject to statistical secrecy
- stored personal data are for the exclusive use of the technical departments in charge of agricultural statistics at the Ministry of Agriculture and may not be communicated in any form to other users.

III. PERIODICITY

The survey on the structure of holdings (1987, 1990, 1993, 1995, ...) is held every two years between October and December.

The reference period is between 1 November and 31 October for land use, 1 October for livestock production, except turkeys and ducks, and the day of the survey extrapolated over the last twelve months for family or permanently employed non-family labour. For casual non-family labour it is the last agricultural year.

IV. SURVEY UNIT AND FIELD OF OBSERVATION

The survey unit is the agricultural holding, which must meet the following three conditions:

Condition 1:

The utilised agricultural area must be one hectare or more.

Utilised agricultural area includes:

- arable land (including open field fresh vegetables)
- market garden crops and crops under glass
- permanent crops (vineyards, orchards, etc.)
- pasture (including moorland and productive grazing)
- kitchen gardens.

Condition 2:

The area under specialised crops must be over 20 ares.

The threshold of 20 ares under specialised crops applies only to units which do not attain the threshold of one hectare of utilised agricultural area. Specialised crops are:

- hops
- tobacco
- vegetable, flower or industrial crop seeds
- fresh vegetables
- flowers and medicinal plants
- vineyards
- orchards
- soft fruit
- nurseries of non-arable seedlings (shrubs, fruit trees and bushes, vines, forestry).

Comments:

- vineyards with scattered fruit trees are counted as vineyards
- combined pastures and orchards are counted as orchards only if the average spacing of the trees is less than 12x12 metres
- trees to which no particular care is devoted and whose fruit is not normally harvested every year are not counted as orchards; this applies to certain plantations of apple trees, olives, almonds and chestnuts
- the area of the kitchen garden is restricted to the portion of the garden under vegetable or fruit crops for human consumption.

Condition 3:

Existence of a minimum agricultural production, animal or vegetable, of one of the following species or crops, whatever the area of the holding:

This condition comes into play only in cases where conditions 1 and 2 are not adequately met.

Agricultural production sufficient to justify classing the unit as an agricultural holding will be considered to occur if one of the following conditions is met:

a) Existence of a minimum number of animals of one of the following species:

- a reproductive male covering females on a regular basis (stallion, bull, ram, breeding ass, boar, he-goat, etc.)
- a breeding mare or mule
- a cow
- two cattle over two years of age
- a breeding sow
- six breeding ewes
- six goats
- ten breeding rabbits
- one hundred laying hens
- ten beehives
- incubation capacity for 1 000 eggs.

b) Existence of one of the following livestock activities:

- horse breeding with at least one breeding mare
- fur farming (mink, coypu, chinchillas, etc.)
- game breeding in captivity for slaughter or sale.

- c) Annual production must amount to:
- 2 horses for slaughter
 - 5 battery calves
 - 10 sheep for slaughter
 - 10 goats for slaughter
 - 5 pigs
 - 200 rabbits for meat
 - 500 poultry for meat
 - 50 force-fed poultry
 - 10 000 eggs.
- d) Existence of a minimum area under one of the following crops:
- 20 ares of asparagus
 - 20 ares of cabbages for sauerkraut
 - 15 ares of strawberries
 - 5 ares of fresh vegetables
 - 5 ares of flowers or shrubs
 - 10 ares of vineyards (wine with appellation of origin)
 - 5 ares of Champagne vineyards
 - 5 ares of nurseries (shrubs, flowers, forestry or fruit trees)
 - 40 individual fruit trees yielding fruit.
- e) Actual production in the previous agricultural year of:
- 2 tonnes of endives
 - 1 tonne of mushrooms
 - cress for sale.

The above criteria (animal or vegetable) cannot be cumulated.

V. SAMPLE PLAN

1. Stratification

Stratification is carried out **regionally** by department. There is also stratification by type of farming and by economic size of holding (ESU) (see Table 2). The sampling plan covers 17 strata by type of farming and 9 strata by economic size of holding (ESU). The sampling plan is drawn up at department level with a set number of questionnaires per department.

This distribution of questionnaires applies the following criteria:

- it must be representative at department level
- a limited number of number of questionnaires per department
- the significance of the sample surveys in smaller departments which are excluded from many specific survey fields, even those that are important at this level (livestock surveys in particular).

Each department prepares 1 800 questionnaires. The only departments excluded from this equal distribution are the eleven departments with fewer than 4 000 holdings, for which a one in five sample is drawn.

This gives a total of 141 532 questionnaires.

As the sample is used for a relatively long period of time, the sampling ratios within a department are fairly uniform in order to reduce the risks associated with sample ageing.

The following holdings are "atypical by nature":

- farms belonging to educational establishments
- research centres
- special establishments (insemination, selection, breeding and large-scale incubation centres, riding stables, etc.)
- units managed by organisations whose principal activity is non-agricultural (municipal nurseries and glass-houses, farms belonging to religious institutions, etc.)
- kitchen gardens belonging to institutions (hospitals, hospices, etc.).

Owing to their significance holdings that are atypical by nature are exhaustively surveyed.

2. The sample frame

The sample frame used to select the sample is generally the magnetic tape containing the individual holding data from the respective previous exhaustive agricultural census. This sample is also used for the major SCEES surveys: structural surveys and livestock surveys, for example.

In each case the sample is updated during field work, especially in the case of the structural survey.

At the start of the questionnaire, a series of questions serves to determine whether the holding is still represented in the sample (e.g. it no longer attains the definition threshold), or lies fallow (e.g. it no longer produces agricultural products), whether it is still being farmed or is a new farm (e.g. created using land from another holding).

The base is also updated using external information which involves including new holdings in the basic population.

3. Extrapolation

The results of the sample surveys are extrapolated freely from the collected data.

VI. ORGANISATION AND EXECUTION OF THE SURVEY

The Ministry of Agriculture's Central Office for Statistical Surveys and Studies (SCEES) is responsible for the methodological, technical and organisational preparation of the survey. It coordinates 19 regional statistical offices (corresponding to 22 programme regions) and 93 departmental statistical units (corresponding to the 96 departments).

The agricultural census, which is conducted as part of an exhaustive survey, plays an important role statistically. It is used to update the register of agricultural holdings that serves as a sampling base for structural surveys.

The agricultural census provides reliable data on the structure of agricultural holdings at the most detailed geographical level, i.e. the commune.

1. Register of holdings

The aim is to compile a list of those agricultural holdings to be visited by an enumerator from the respective departmental agricultural statistics unit.

The 1988 agricultural census was carried out in two stages between March 1987 and July 1988:

- a provisional register of holdings was compiled
- the data contained in this register was updated by a special communal committee and a list was compiled of the holdings to be surveyed.

1.1 Tasks of the register

In France the register of holdings is used to assist with the preparation, execution and processing of the surveys. It is primarily useful when:

- determining and checking the survey units used in the individual series of agricultural statistics
- drawing up the survey sample
- addressing and dispatching the survey documents
- checking receipt of the questionnaires and addressing further queries to respondents, and
- determining the extent of the respondent's burden in terms of agricultural statistics.

1.2 Characteristics to be included in the register

The following characteristics are recorded in the register:

- a random holding number (it contains no data on characteristics which could reveal information about the holding. The regional statistical offices give each newly created holding a "non-recurring" number and store it in the register of holdings for the duration of the holding's existence)
- the forename and surname, name of company, institution or authority, the address and telephone number of the holding owners or managers, and
- the characteristics covered in the structural survey.

1.3 Register management

The register of holdings was compiled with the aid of the files from the previous agricultural census (1979) and was aligned with the other administrative files. In so doing the main basis for comparison was the register of the Mutualité Sociale Agricole (MSA - farmers' mutual benefit society), which administers sickness benefit, family allowance and retirement pension schemes for farmers.

Thus the files from the previous census were aligned with the other files to obtain information on changes in existing holdings (changes in the holding manager, changes in area, etc.) and the creation of new holdings. The documentation assembled in this way was examined in detail at local level in the 36 000 communes. In each commune, a "communal committee" was convened, generally composed of a majority of farmers or other persons familiar with agricultural matters.

The communal committee examined the register of holdings, cancelling entries that did not correspond to holdings, entering those that had been omitted and confirming validated entries.

The communal meetings were followed by a phase of administrative work to produce the list of agricultural holdings for use by the enumerators. This list was not considered final until the enumerators had completed their field work.

In addition the register of holdings was updated between two agricultural censuses. The register used for administrative purposes served as a basis for comparison. After the register had been updated in the respective departments the central register managed by the SCEES was updated.

2. Progress of the survey

2.1 Preparation of the survey

2.1.1 Questionnaire

Starting in 1986, decentralised discussions involving statisticians, farmers' representatives, administrative experts and representatives of professional federations led to the drafting of a single questionnaire for the 1988 agricultural census. Initial pilot surveys were conducted at the beginning of 1987. These prompted further changes in the questionnaire, which therefore had to be tested again in the middle of 1987.

Alongside the questionnaire, an instruction booklet was drafted for use by the enumerators. This was a volume of some 160 pages explaining each survey characteristic in the questionnaire clearly and simply with the aid of practical examples for individual characteristics where necessary.

The departmental agricultural statistics units organised preliminary training for the 5 000 enumerators. Some 16 500 days of training were planned and organised.

To compile the questionnaire for the structural survey the SCEES set up working parties of central, regional and departmental statisticians. They drew up a single questionnaire, similar to the one used in the agricultural census. Outside bodies were also consulted (professional bodies, civil servants, etc.) but to a lesser extent than for the census.

The enumerators (about 900), trained by the departmental agricultural statistics units, were supplied with instruction booklets.

The survey was conducted by enumerators in the field, in an interview lasting a little over one hour, but no media campaign was planned.

Checking of the questionnaires was decentralised using the same procedures as for the agricultural census.

2.2 Conduct of the survey

The field survey was preceded and accompanied by a media campaign. Its main slogan summarised the purpose of the agricultural census: "Farming as revealed by those keeping the land alive". The aim was to gather sufficient information from the people who keep the land alive to draw a faithful portrait of it.

The main medium used was the radio. More than 40 different broadcasts paved the way for the enumerators and explained the purpose of the census in a period in which holdings were undergoing far-reaching changes. The radio campaign was backed by advertisements in the agricultural press.

Work in the field was backed by:

- posters displayed in town halls, agricultural co-operatives, banks, etc...
- publication of an explanatory leaflet distributed in town halls, etc...
- stickers for the enumerators' cars; enumerators also received an official identification card and a folder bearing the census logo.

Starting on 1 September 1988 and for the next six months or so, some 5 000 enumerators interviewed a little over one million farmers, an average of 200 per enumerator.

The interviews lasted a little more than an hour on average, with the enumerator taking care to ensure that the answers throughout the 12 pages of the questionnaire were at least fairly reliable.

As soon as the questionnaires were completed, the data was recorded in the proximity of the survey venue and transcribed onto a data medium.

2.3 Plausibility checks and presentation of tabular results

In the 1979 agricultural census all the questionnaires were recorded centrally and transcribed onto a data medium. In the 1988 agricultural census the French telecommunications network TRANSPAC was used. The recording of data was generally carried out decentrally, i.e. in the capital of each department.

Some 450 microprocessors communicated with 115 mini-computers installed throughout France. Some 500 people were specially trained to input the census results on magnetic tape and check them.

Nine hundred checks were carried out on each questionnaire in order to detect all possible errors:

- calculation checks: e.g. the sum of the individual crop areas must equal the utilised agricultural area
- plausibility checks: e.g. if there are cattle, there must be an area under forage crops
- regional checks for the regional items.

The entry of a million questionnaires was completed in less than 100 days. All the data were checked and transmitted by TRANSPAC to INSEE's central computer in Aix en Provence. The processing capacity could extend to 20 000 questionnaires per night, or about 50 million bytes.

The exhaustiveness of the coverage was then checked and preliminary tables extracted to detect any remaining anomalies.

To summarise, the 1988 agricultural census involved:

- 1 000 000 farmers interviewed
- 5 000 enumerators, checkers, training officers
- 10 million kilometres travelled by enumerators in France
- 12 million written pages
- 2 years of preparation
- 16 500 days training (enumerators, checkers, training officers)
- 500 operators for 100 days to input one million questionnaires (one questionnaire = 2 500 characters).

2.4 Processing and analysis

The response rate was close to 100%. Cases of refusal to co-operate were generally dealt with by the department statistician. Legal action was rarely taken, but penalties could be inflicted owing to the obligation to respond to statistical surveys laid down in the 1951 Law.

On 1 May 1989, eight months after starting data collection in the field, 99.9% of data had been collected, 85% had been checked, 59% inputted centrally and seven departmental agricultural statistics units had already begun to print the results. Each of the 93 departmental units and of the 19 regional units published their results according to a common format.

As soon as the exhaustive results had been loaded in the SCEES computer, it was possible to access them on demand at central, regional and departmental level.

2.5 Reliability of results tabular results

Owing to the exhaustive character of the survey the results of the agricultural census are reliable at the lowest geographical level (commune); the same cannot be said of the results of the structural surveys, which are sample surveys.

In sample surveys the tabular results for the main characteristics are reliable at national, regional and departmental level. In the case of rarer data, the departmental results may be subject to random errors.

Results below the departmental level should therefore not be overstated.

The SCEES calculates coefficients of equivalence for the main items. For example, at national level, the value is 0.999 for the area under cereals, i.e. the error in relation to the value for the whole population is 1:1 000.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

The SCEES is responsible for the statistical secrecy of the tabular results it publishes.

In the absence of a legal basis for the statistical secrecy of agricultural holdings, these are equated with private households as regards the use of data:

- access to individual data on agricultural holdings is not permitted
- access to aggregated data may be permitted if they comply with the following conditions: there must be at least three units in each aggregate, and no one unit may account for more than 85% of the weight of a table field.

VIII. NATIONAL DIFFERENCES

80% of the characteristics covered in the French questionnaire relate to Community requirements.

1. Survey characteristics and special features

In France additional items are surveyed for national purposes. These are:

- data necessary to update the permanent sampling base (PSB)
- holding manager: managers in place since the previous survey, length of service as holding manager. These results provide a basis for demographic studies and holding projections
- questions on the management of the holding: use of information technology, VAT system, tax system, extent of modernisation aids, etc. These questions provide indicators of the economic size of holdings. They are cross-mapped with other variables for the purpose of various studies
- the breakdown into family workers and non-family labour is more detailed.

For each person living or working on the holding, the enumerator records the following information:

- family tie with holding manager or co-manager (in the case of a holding run by several families)
- sex
- year of birth
- matrimonial status
- general education and agricultural training

- regular further agricultural training
- working time spent on a main or secondary gainful activity on the holding
- whether or not paid by the holding
- principal occupation and secondary occupation, if any, reported voluntarily on the basis of the current INSEE classification.

The aim of this question is to establish a link between the agricultural surveys and the population censuses and other household or personal surveys conducted by the INSEE:

- whether receiving a pension and if so what type (agricultural or other).

For each permanent employee, the following information is recorded:

- sex
- year of birth
- general education and agricultural training
- regular further agricultural training
- working time spent on a main or secondary gainful activity on the holding
- number of agricultural employers.

For casual labour, only the number of days worked is recorded.

2. Legal status and management of holdings

In France holdings in the hands of *natural persons* include:

- any individual,
- certain groups of natural persons: spouses, siblings, joint beneficiaries under a will or intestacy joint who manage a holding jointly.

Holdings in the hands of *legal persons* include:

a) Private corporations:

- non-stock companies, especially agricultural land syndicates (groupements fonciers agricoles - GFA) and collective farming groups (groupements agricoles d'exploitation en commun - GAEC);
- commercial firms, whether partnerships or joint-stock companies;
- general partnerships, limited partnerships, partnerships limited by shares, private limited companies, public limited companies;
- co-operative societies (agricultural collective interest societies (sociétés d'intérêt collectif agricole - SICA) belong legally to the preceding categories);
- associations; professional federations
- economic interest groups (EIGs);
- foundations.

b) public corporations:

- holdings owned by the state, local authorities, public bodies (National Institute for Agricultural Research, public educational institutions, hospitals, etc.).

c) semi-public corporations:

- nationalised companies, semi-public companies.

3. Treatment of land use

Combined crops grow for all or part of the growing season on the same land:

- Where annual crops are combined, both are considered to be principal crops and the area of the field is allocated among the crops on a pro rata basis. This also applies to combinations of several permanent crops

- Where a permanent crop is combined with an annual crop, the permanent crop is considered to be the principal crop and the whole area of the field is allocated to this crop
- In the case of **successive crops**, the principal crop is the one with the highest annual production value.

4. Annual work units (AWUs)

AWUs are calculated retrospectively. The enumerators calculate the time of agricultural work by family members and permanent non-family labour on the basis of six steps: no activity, less than 1/4 time, 1/4 to less than 1/2 time, 1/2 to less than 3/4 time, 3/4 to less than full time, and full time.

The reference figure for full time is 39 hours and more per week. For seasonal and casual labour and for labour supplied by enterprises, working time is recorded in number of days.

AWUs are calculated for family members and permanent non-family labour using the following table:

< 1/4 time:	(10 hours/week)	0.125 AWU
1/4 to < 1/2 time:	(10 - <20 hours/week)	0.375 AWU
1/2 to < 3/4 time:	(20 - <30 hours/week)	0.625 AWU
3/4 to < full time:	(30 - <39 hours/week)	0.875 AWU
full time:	(39 hours and more/week)	1 AWU

For casual non-family labour and for days spent in further training (école technique d'agriculture - ETA) and in agriculture machinery co-operatives (cooperative d'utilisation du materiel agricole - CUMA), the calculation is as follows:

number of days x 3.6363 (1 000/275 days = 3.6363).

IX. LESS FAVOURED AND MOUNTAIN AREAS

Towards the end of the 1970s, within a restricted geographical framework, the Community introduced measures which, though common, were differentiated by region. In order to ensure the continuation of farming in areas with difficult working conditions, the Community adopted Directive 75/268/EEC on mountain and hill farming and farming in certain less-favoured areas. The less-favoured farming areas can be divided into:

- Mountain areas: land where farming possibilities are limited owing to the altitude,
- "Less-favoured areas in danger of depopulation" where the conservation of the countryside is necessary. These exhibit the following characteristics:
 - the presence of infertile land
 - because of the low productivity of the environment, results which are appreciably lower than the average, and
 - a low or dwindling population predominantly dependent on agricultural activity,
- Areas affected by specific natural handicaps, in which farming must be continued in order to conserve the countryside and to protect the environment or to preserve the tourist potential.

In France, this classification has been further divided, for mountain areas, into high mountain areas and mountain areas, and for less favoured areas, into piedmont areas and less favoured areas as such. The criteria for the inclusion of communes under the French territorial classification were published in the Official Journal, Decree No 76/395 of 28 April 1976. These criteria largely follow those contained in the EEC directives. However, piedmont areas are classed as less favoured areas solely on topographical criteria (handicap rating: altitude + slope greater than 1.5) and not on agro-economic criteria, as are other less favoured areas.

In addition, France has established a special category (dry areas) in order to provide aid to farmers in the hinterland of the Mediterranean coast. This category overlaps with the previous one. The total land area classed under the various categories is currently 12.4 million hectares, or about 40% of utilised agricultural area.

X. PUBLICATIONS

The results of the 1988 agricultural census are the subject of numerous publications:

- 28 standard tables, called PROSPER, giving an 8-page summary of the main results
- 9 national volumes: inventories by region and department, 8 pages per region, 8 pages per department (4 volumes): vineyards, mountain areas, full-time holdings
- 1 departmental volume: inventories by canton and agricultural area
- a national study covering various subjects (land use, livestock, machinery, population) with maps, figures and comments.

Each of the 95 departments and 22 regions has also published its own data with tables and comments.

In addition, a series of articles on specific subjects was published in the SCEES's "Cahiers de statistique agricole" (Data on agricultural statistics) : mountain areas, young farmers, collective farming groupings, successors to holding managers, casual non-family labour, etc.

Each structural sample survey is also the subject of a general publication containing results and comments, as well as a series of articles on various subjects.

The SCEES also produces projections of holding numbers on the basis of these surveys.

Table 2: Sampling plan

Geographical level	Type of farming	Economic size of holding (ESU)
95 Departments	11 Cereals 12 Field cropping 28 Vegetable gardening 29 Flowers and ornamentals 37 Quality wine 38 Wine other than quality wine 39 Fruit and other permanent crops 41 Cattle, dairying 42 Cattle, rearing and fattening 43 Cattle, rearing and fattening combined 44 Sheep, goats and other grazing livestock 50 Granivores 60 Mixed cropping 71 Mixed livestock, mainly grazing livestock 72 Mixed livestock, mainly granivores 81 Field crops - grazing livestock combined 82 Various crops and livestock combined	0 to 2 599 2 600 to 5 199 5 200 to 7 799 7 800 to 10 399 10 400 to 15 599 15 600 to 20 799 20 800 to 51 999 52 000 to 129 999 130 000 and more

IRELAND

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I. INTRODUCTION

In Ireland, the reporting system breaks down into surveys which are conducted **annually** and those held at greater intervals. Data on areas under crops, livestock populations, labour force and machinery are collected at yearly intervals, by means of either an agricultural census or a sample survey. At roughly 10-yearly intervals an agricultural census (1980, 1991) is carried out in the form of a full-scale survey. In the intervening years, sample surveys take place annually.

In June 1988 the Central Statistics Office (CSO), as part of the plan to develop agricultural statistics, discontinued the survey carried out in June with the help of enumerators and introduced a postal survey which likewise takes place in June. (A similar procedure was begun as early as December 1987 in respect of the December livestock census.) Since 1989 the data on areas under cultivation for crop products and cereals have been based on this June postal survey. For 1991 the figures were taken from the 1991 agricultural census. From 1992 the figures on areas under cultivation for crop products and cereals have been taken from the annual sample survey of the structure of agricultural holdings.

To provide comparable data on the structure of agricultural holdings at EUR-12 level, harmonised surveys have been undertaken under the provisions of special Council Regulations and Directives. These surveys; commonly referred to as Farm Structure Surveys; were begun in Ireland in 1975.

The basic information collected relates to areas under crops; numbers of livestock; agricultural labour input on the farm and numbers of machinery on the farm. The survey reference date is 1 June except for the labour input where the reference period is the 12 months ending 31 May.

II. LEGAL BASIS

- Commission Decision 85/377/EEC of 7 June 1985 establishing a Community typology for agricultural holdings (OJ No. L 220 of 17 August 1985).
- Council Regulation (EEC) No 571/88 of 29 February 1988 on the organisation of Community surveys on the structure of agricultural holdings between 1988 and 1997 (OJ No L 56 of 2 March 1988).
- Council Regulation (EEC) No 807/89 of 20 March 1989 amending Annex I to regulation (EEC) No 571/88 as regards the set-aside of arable land (OJ No L 86 of 31 March 1989).
- Commission Decision 89/651/EEC of 26 October 1989 relating to the definitions of the characteristics and to the list of agricultural products for the surveys on the structure of agricultural holdings during the period 1988 to 1997 (OJ No L 391 of 30 December 1989).
- Commission Notice No 91/C 268/01 - Standard gross margins for the various agricultural enterprises and coefficients established pursuant to Commission Decision 85/377/EEC of 7 June 1985 establishing a Community typology for agricultural holdings (OJ. No C 268 of 14 October 1991).

III. FREQUENCY

In Ireland there are generally every 2 years EC-structure surveys - 1975, 1977, 1980, 1991 (full-scale survey), 1983, 1985, 1987, 1989, 1993, 1995, 1997 (sample).

IV. SURVEY UNIT AND FIELD OF REPRESENTATION

In Ireland a farm is defined in accordance with Article 5 of Council Regulation (EEC) No 571/88 of 29 February 1988 as:

- a single unit; both technically and economically, which has a single management and which produces agricultural products;

In Ireland only farms with an area used for agriculture of at least 1 hectare or engaged in intensive production (e.g. pigs; poultry) are covered.

The area used for agriculture includes:

- arable land,
- areas with silage and hay,
- permanent pasture and meadow as well as
- rough grazing.

Commonage land used by the farm is not included.

V. SAMPLE SURVEY

1 Basis of the sampling plan

In Ireland the sample serves a multi-purpose use as it provides inventory results on different surveys, such as:

- livestock census,
- survey on land use,
- annual census and
- EC-structure survey.

2 Stratification

In Ireland there are ten strata, nine based on the size classes of the area used for agriculture (AA) and 1 stratum for specialised farms:

- under 1 ha
- 1 ha and under 2 ha
- 2 ha and under 5 ha
- 5 ha and under 10 ha
- 10 ha and under 20 ha
- 20 ha and under 30 ha
- 30 ha and under 50 ha
- 50 ha and under 100 ha
- 100 ha or more

- specialised farms.

The number of farms selected in a stratum is dependent on the relative proportions of cattle, sheep and cereals in that stratum.

3 Sample frame

The frame for selecting the sample is the agriculture farm register. This is the list of farms returned in the last Census (June 1991) adjusted by changes in the period since then. Information about changes to the Census register arise either directly from agricultural postal surveys or indirectly from administrative sources.

The selection procedure is a combination of systematic and random selection. Some farms returned in the previous June survey (not a farm structure survey year) are selected to enable initial inventory estimates of crop areas and livestock numbers.

A second consideration in the sample selection process is to rotate through the register of farms between Censuses. This requires the sampling of a number of farms that have not been surveyed since the last Census.

A third consideration is to sample possible birth and death farms where the information has been obtained from administrative sources.

Overriding all these factors is the need to ensure that holdings are sufficiently distributed geographically to be able to publish structural data at County level.

4 Extrapolation

The 1991 agricultural census was a full-scale survey and as a result grossing factors were not relevant. The 1993 survey results will be obtained by grossing the returns to the number of farms in each stratum. Particular attention is paid during this process to the grossing factors of specialised farms.

VI. ORGANISATION AND IMPLEMENTATION OF THE SURVEY

1. Register of holdings

1.1 Structure of the holding register

In the context of the extensive agricultural census conducted in 1980 a non-computerised register of all proprietors with at least 0.4 ha of utilised agricultural area (UAA) was compiled. In the subsequent years the register was updated in part (for certain areas) on the basis of the surveys carried out. The current figures were taken from this register and stored in an electronic file.

This file was networked with an administrative register of the Ministry of Agriculture used for monitoring cattle herds and flocks of sheep with regard to animal health etc. and then supplemented with data from this register. This supplemented CSO list was then tested under real conditions with the aid of a pilot survey of about 700 holdings in various parts of the country. The remit of the enumerators deployed in the survey was to

- check and complete the CSO list,
- provide the updated list with references to the Ministry of Agriculture's list and

- fill in a questionnaire for each active agricultural holding with at least 2 ha of UAA

The pilot survey showed that on the basis of the information obtained locally the enumerators had to increase the number of holdings on the CSO list by around 10%, but that overall the CSO list already provided a good basis on which to start.

It was planned to collect the information required for setting up the holding register as part of the 1991 agricultural census (full-scale Community survey of the structure of agricultural holdings). For this purpose it was first of all necessary to compile a list of all persons and holdings coming into consideration. This list was drawn up in several steps.

- In order to set up as complete a register as possible of all the holdings covered by the survey, filter questions were used in the 1991 population census to determine all persons employed in agriculture and all proprietors of at least 0.4 ha of UAA. The list of persons and holdings thus recorded served as a basis. Of the holdings later included in the scope of survey of the 1991 agricultural census, around 81% were identified by these filter questions.
- The list of all persons and holdings recorded with the aid of the filter questions was then compared with the register compiled on the basis of the 1980 agricultural census.
- All holdings which were listed in the 1980 register as having more than 4 ha of UAA but were not contained in the list based on the population census were included in the latter.
- In addition, the identifiable persons who were included in the Ministry of Agriculture's list but not in the population-census list were contacted and, where appropriate, added to the latter. Of the holdings which were later recorded in the 1991 agricultural census, around 16% were identified on the basis of the 1980 register and the Ministry of Agriculture's list.
- The list was then supplemented by the enumerators both with information based on their personal knowledge of local conditions and with information which they collected locally in the course of their survey work. This resulted in the addition of around 3% of the holdings later recorded in the register.

All the persons and holdings recorded in this way (a total of 263 219 persons and holdings, of which around 170 000 were later included in the holding register) were visited by enumerators in the course of the agricultural census and questioned personally on their current situation in the agricultural sector and - if necessary - on details of their agricultural activity, in order to collect the information required for the register of holdings. For this purpose the information required for the holding register was entered in the first two pages of the questionnaire for the 1991 agricultural census. Where the size of the identified holdings lay above the survey threshold, the next pages of the questionnaire (with the detailed questions) for the 1991 agricultural census were also filled in.

The register of holdings was drawn up on the basis of these interviews.

1.2 Tasks of the register

The farm register is compiled and managed by the Central Statistics Office and is used in preparing, carrying out and processing agricultural statistics.

The register is used primarily:

- for identifying the relevant farms for each type of agricultural survey
- for checking potential new birth farms e.g. new land leaseholders,
- to select samples from,
- for name and address details for sending out questionnaires,
- for recording of questionnaire receipts,
- for recording of farm changes e.g. changes of ownership etc.,
- for direct grossing of sample results,
- as a basis for field interviews in the next agricultural Census.

1.3 Characteristics to be included in the register

The characteristics included in the register are decided by the Central Statistics Office.

- unique 6 digit reference number plus 1 check digit,
- name and address and telephone number of the farm holder.
- geographical location of the farm residence and headquarters,
- livestock,
- area used for agriculture,
- response codes to each agricultural survey,
- interviewers enumeration area in 1991 Census (historical)
- specialised farm indicator,
- text variable for explanatory notes

Other variables can easily be added as required.

1.4 Register management

Three kinds of amendments are made to the register to keep it up-to-date:

- new farms are added,
- changes to existing farms are made;
- certain farms are marked as no longer in existence.

These amendments are generated either through survey returns or by information from administrative sources. For the latter source potential new farms are cross-checked against the existing register to see if the farmer is already on the register. If the farm is not found on the existing register then it is included in the next survey to establish its status.

Similarly if administrative sources indicate that a farmer has ceased operations then that farm is included in the next survey to establish the situation.

In between the major agricultural surveys in June and December, register enquiry forms are issued to farmers as necessary to establish changes in their status.

In the major agricultural surveys in June and December there is a wide variety of possible responses. The response code appropriate to each questionnaire returned is kept in a special variable on the register created for that survey. The following are a list of some of these responses:

- farm is still in operation and usable return has been received
- farm involved in forestry only
- farm already exists under another reference number on the register
- new farm (from potential births file etc.)
- all the land has been let
- no response received
- all the land has been sold

- farm has been amalgamated with another farm
- the holding has no utilized agricultural area (AA)
- the farmer has refused to return the questionnaire
- the returned questionnaire is unusable (illegible etc.)
- the farmer has retired or gone away etc.
- the whole farm has been passed to a new owner not previously on the register
- the land is temporarily idle
- the post service could not identify the location of the farm residence

An appropriate register management action is taken for each response type. For example, if the return indicates that all the land has been let then the name and address of the leasee is cross-checked against the farmers names on the register. If the name refers to a new farmer (name & address not found) then either a register enquiry form is issued or the farmer is included in the next survey to establish that it is a new farm.

2 Course of the survey

2.1 Preparation of the survey

The Central Statistics Office is responsible for all aspects of the survey.

2.1.1 Questionnaire

All the characteristics of land use, livestock, labour force and agricultural machinery and equipment are included in a single questionnaire. When an agricultural Census is being undertaken, the Central Statistics Office invites submissions from other relevant organisations for new questions to be added to the form. Between censuses the form is not generally changed.

The questionnaire is printed inhouse by the Central Statistics Office.

2.1.2 Development of the tabular programs

The Central Statistics Office publishes three types of reports from the farm structure surveys:

- provisional results at national level for main crops and livestock;
- final results at regional and national level for arable land crops and livestock;
- final results at regional and national level for all items on the questionnaire.

The tabular content of each of these reports is decided within the Central Statistics Office. Ad-hoc-inquiries are produced according to the specification of the person requesting the information.

2.1.3 Production of the programs

The statistician responsible for the survey writes the computer programs for both the standard tables and the ad-hoc tables. The computer languages used are TPL and SAS.

2.2 Conduct of the survey in the field

Agricultural censuses have always been conducted by field interview. Sample based farm structural surveys are conducted by post with a small amount of telephone follow-up as necessary.

The survey reference date is 1 June and three reminders are issued at approximately 12 day intervals.

Depending on response rates, a publicity leaflet may be issued to farming journals, farming radio programmes and to local and national newspapers. A freefone facility is also available to farmers who may have queries relating to the form.

2.3 Plausibility checking and production of the tabular results

As questionnaires are returned initial brief details are entered into the computer to record receipt and allow reminders to be issued to non-respondents. The form is the subject to a cursory manual check for legibility, correctness and completeness. The questionnaires are then batched and sent for keying by specialist data entry staff. Data corrections are carried out by agricultural staff directly rather than through data entry.

The keyed forms are added to a master dataset and subject to a sequence of edits. Initially these edits concentrate on the arable land crops and livestock items to be published in the provisional report. Subsequent edit programs are run on the entire questionnaire.

Allowance is made for partial non-response within a questionnaire by making computer generated estimates for these items based on similar farms in the same locality. For example if the age of a spouse has not been completed then an age is estimated based on the age of the holder and on the age profile of other spouses in that region.

2.4 Construction of the farm structures survey file

All the characteristics of land use, livestock, labour force and agricultural machinery and equipment are included in a single questionnaire.

When the edit process has been completed, a farm structures file for the Eurostat is then created and this is subject to the Eurostat edit programs. Any errors at this stage are corrected on the basic dataset and the farm structures file is recreated.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

Responsibility for maintaining the confidentiality of the data rests with the Central Statistics Office. The name and address register is held in a separate file to the data file. These datasets are linked through a common anonymous reference number.

Before publishing results, tables are checked for cells containing few items of data (only a few items of data (only a few farm returns in the cell) and for cases of dominance (1-2 farms dominate the value in the cell). These cells are suppressed if the farmer does not give the necessary approval.

VIII. NATIONAL DIFFERENCES

1 Survey unit and field of representation

Both EC-Structure-Survey and national structural survey cover the same agricultural farms population.

2 Typology

Apart from the Community typology for agricultural holdings, Ireland also uses a typology regarded as being of more relevance to Irish agriculture. The seven farm types used for publication are derived from the EC typology classes. Their definition in terms of Standard Gross Margins (SGM) is as follows:

Type of farm	Definition
1. specialist tillage	tillage > 2/3
2. specialist dairying	dairy cattle > 2/3, dairy cows > 2/3 dairy cattle
3. specialist beef production	all cattle > 2/3; dairy cows ≤ 1/10
4. specialist sheep	sheep > 2/3
5. Mixed grazing livestock	1/3 < grazing livestock ≤ 2/3; no other activity > 1/3
6. Mixed crops and	tillage > 1/3; grazing livestock > 1/3; plus other farms
7. livestock	not yet classified
8. Other	all other farms

3 Annual work units (AWU)

Each person 15 years of age and over who carried out some work on the farm in the 12 months preceding the survey date is included provided he/she is either a member of the family or a regular non-family worker. The number of weeks worked and the average number of hours worked per week is collected. One annual work unit is set at 1800 hours per year for each person.

For casual and relief workers, the number of person-days worked in the year is collected and converted to AWU by using an average of 8 hours per day. Holidays and sick leave are excluded for all workers.

4 Survey characteristics and special features

The following headings in the Community list of characteristics are not surveyed because they do not exist or are optional:

- durum wheat
- rye
- grain maize
- rice
- flowers under glass
- seeds and seedlings
- fallow land (included under other crops)
- nuts
- citrus plantations
- olive plantations
- vineyards
- permanent crops under glass
- commercial/non-commercial breakdown of wooded areas
- secondary crops
- irrigable land
- combined crops
- set aside land and its uses
- number of rabbits

- number of bee hives

For national purposes, the following additional characteristics are surveyed:

- winter and spring classification of barley, wheat and oats
- equine categories breakdown
- income earning non-agricultural activities on the farm
- sowers, distributors and sprayers
- slurry/manure handling equipment
- balers

IX. LESS-FAVOURED AREAS AND MOUNTAIN AREAS

1 Legal bases

The basis for defining less favoured areas in Ireland is:

- Council Directive of 28 April 1975 on mountain and hill farming in certain less favoured areas (75/268/EEC).
- Council Directive of 27 June 1985 defining less favoured areas in Ireland (85/350/EEC).
- Council Regulation of 12 March 1985 on improving the efficiency of agricultural structures (85/797/EEC).
- Council Directive of 22 July 1991 (91/466/EEC) amending Directive (85/350/EEC) concerning the Community list of less favoured farming areas within the meaning of Directive (75/268/EEC) (Ireland).

2 Delimitation and grouping of areas

Ireland is composed of around 50.000 townlands. The farmer identifies the townland in which the farm headquarters is located and the Central Statistics Office maintains a file for farm structures survey use showing the less favoured areas status of each townland according to submissions by the Department of Agriculture, Food and Forestry.

X. PUBLICATIONS

Census of Agriculture, June 1991 - First Results (December 1992)

Census of Agriculture, June 1991 - Detailed Results (April 1994)

ITALY

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- II. LEGAL BASIS
- III. PERIODICITY
- IV. SCOPE OF THE SURVEY
- V. SAMPLING PLAN
- VI. ORGANIZATION AND IMPLEMENTATION OF THE CENSUS
 - 1. Holding register
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- VII. STATISTICAL CONFIDENTIALITY OF THE TABULAR RESULTS
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 - 1. Scope of the survey
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- IX. LESS-FAVoured AND MOUNTAINOUS AREAS
- X. PUBLICATIONS

I. INTRODUCTION

In Italy, surveys of the structure of agricultural holdings are full-scale or sample surveys. An agricultural census is conducted in Italy about every ten years. They have been held on the following dates:

1. 15 April 1961
2. 25 October 1970
3. 24 October 1982, and
4. 21 October 1990.

The fourth agricultural census was preceded by a pilot survey covering a limited number of municipalities and held between 26 November and 5 December 1989.

In 1985 and 1987, sample surveys of the structure of agricultural holdings were conducted and Eurostat was provided with the data in accordance with agreements reached at Community level.

To obtain the information on areas under cereals required for the land use survey, the Istituto Nazionale di Statistica (ISTAT) has been conducting a sample survey annually in July since 1985. Since 1986, this has been a postal survey and since 1987 it has covered all autonomous regions and provinces. In 1990, it was renamed the "Survey of the production of specific cereals".

II. LEGAL BASIS

The legal basis for the fourth general agricultural census was Law No 103 of 2 May 1990 and the associated implementing provisions, No 297 of 16.10.1990 (Decree of the President of the Council of Ministers).

Together with the Decree of the President of the Council of Ministers of 3 August 1990, the regions and autonomous provinces were issued a set of guideline and coordinating provisions for organising local offices for the operations connected with the fourth general agricultural census.

In the international context, the census was based on the world agricultural census programme of the UN Food and Agriculture Organisation (FAO) and on Council Regulation No 571/88 of 29 February 1988.

Some specific data on wine-growing were also incorporated in the census under Council Regulation 357/79 of 5 February 1979 and subsequent amendments.

III. PERIODICITY

The structure survey is held every two years as a sample survey. In the agricultural census of 21 October 1990, data on indicators of land use, livestock populations, agricultural labour and machinery were collected and other characteristics (outbuildings and dwellings, mechanical equipment etc) were included for national purposes.

The reference period for the following characteristics was 1 November 1989 to 31 October 1990:

- type of management
- accountancy
- land use
- labour
- mechanical equipment
- contract services
- computer equipment
- producers' cooperatives and organisations.

For the following data, the reference period was 21 October 1990:

- legal form
- total area
- utilised agricultural area (UAA)
- number of livestock
- outbuildings and dwellings.

The reference period for agricultural labour (holder/manager, holder's spouse and other members of the holder's family) was the week preceding 21 October 1990.

IV. SCOPE OF THE SURVEY

The survey units for the agricultural census are agricultural, forestry and livestock holdings. The agricultural holding is an economic unit comprising arable land, including non-contiguous parcels, and as the case may be, various plant and equipment, in which agricultural, forestry or livestock production is carried out by a holder, i.e. a natural person, company or firm that bears the risk either individually (owner/holder or holder with employees and/or partners), or in some form of share-cropping system.

Agricultural holdings also comprise holdings with no agriculturally used land such as livestock holdings in which animals are reared without using agricultural land or livestock holdings in which animals are reared using pastureland belonging to municipalities or public or private organisations. The areas concerned must not form part of such holdings.

Holdings were allocated to the municipality in which the areas were located and thus recorded there. Holdings with land in two or more municipalities were recorded in the municipality in which the central premises, where such existed, or most of the land were located.

The field of survey (the Italian universe) comprises all the agricultural, forestry and livestock holdings, irrespective of their size or type of management and:

- agricultural holdings belonging to research institutes, hospitals, clinics, religious communities, schools, prisons and industrial undertakings;
- establishments for the breeding of bulls, boars and horses, and hatcheries;
- agricultural holdings consisting of permanent pasture or meadowland managed by the municipality authorities (provided for farmers in most cases as pasture for a fee).

It does not cover:

- land not used for agricultural or livestock production or for the national economy as a whole (proposed building land etc);
- holdings which have been completely abandoned because the owner has left or for other reasons, even if the land continues to yield spontaneously;
- parks and pleasure gardens, regardless of ownership, except those located on an agricultural holding;
- small kitchen gardens which generally adjoin dwellings, except those available to an agricultural holder, which are then considered part of the latter's holding;
- small livestock populations generally producing only for the household's own consumption, except those available to an agricultural holder which are then considered part of the latter's holding.

The following do not constitute agricultural holdings: horse stables, land used for training race horses, kennels, cattle markets and slaughterhouses, provided they are not used for breeding.

V. SAMPLING PLAN

The agricultural census carried out in Italy on 21 October 1990 was full-scale.

VI. ORGANISATION AND IMPLEMENTATION OF THE CENSUS

1. Holding register

1.1 Tasks of the holding register

The holding register compiled and operated exclusively by ISTAT provides help in preparing, implementing and processing various surveys. In Italy, the aim has been:

- to build up a register which is entirely computer-supported and operated,
- to provide clear identification for each individual holding,
- to list information on specific holding characteristics regarded as important,
- to list and classify holdings according to these characteristics, and
- to have a continuously updated set of data capable of providing at all times a list of the holdings to be covered, with systematic breakdowns possible down to the lowest regional level (normally the municipality) - for both an agricultural census and certain sample surveys.

1.2. Characteristics to be included in the holding register

The basis for the creation of the holding register in Italy was the data from the individual holdings in the 1982 agricultural census. For each of the approximately 3.27 million holdings covered, detailed information was transferred to a computer-supported basic file. This 1982 register was supplemented with data from various other agricultural surveys of the 1980s and then fully revised and updated with the results of the 1990 agricultural census.

With a view to the compilation of the holding register, the Italian questionnaire for the 1990 agricultural census consisted of a cover sheet in the form of a detachable section and the questionnaire proper. The detachable section mainly contained the personal data about the holder and was separated from the rest of the questionnaire to maintain statistical confidentiality; the remaining sections contained the data on the holding's physical characteristics. Both parts of the questionnaire were provided with an identical holding number in order to be able to link them again subsequently by computer.

The detachable section contained the characteristics to be included in the holding register:

- data identifying the holding and holder, as well as the codes for the municipality, province and the questionnaire of the 1990 agricultural census etc;
- the holding code for the 1982 agricultural census;
- personal details about the holder (e.g. surname, forename, address, telephone number, tax number etc);
- typological data on the holding, such as its economic size and type,
- its NACE classification;
- its main physical characteristics, such as data on the type of management and legal structure, the value of its marketed production, its utilised agricultural area (UAA), area under vines or olive trees, area under cereals by type of cereal, data on livestock population by type of livestock and data on the agricultural workforce;
- stratum number;
- characterisation of forestry holdings;
- data on the location of the holding (mountainous, flat area etc);
- references to any missing details in the detachable section.

A total of 3.02 million questionnaires were thus checked and evaluated for the holding register. The holding register therefore also includes many "extremely small holdings" (only 2.67 million holdings were above the survey threshold set for the 1990 (full-scale) Community Survey).

1.3 Register management

The rapid economic changes in agriculture require continuous checking and updating of the holdings and their characteristics recorded in the holding register.

The basis for proper operation of the register is therefore the inclusion of newly created holdings, the amendment of data stored in the register and the deletion of data on holdings which no longer exist.

In Italy there are two sources of data for updating the ISTAT holding register: information obtained from current surveys by enumerators (e.g. the structure survey, survey of cattle, pigs, sheep, goats, fruit trees, labour etc) or via postal surveys (e.g. on the main types of cereal, wine-growing and olive trees), and from other authorities operating in the agricultural sector.

Continuous updating of course involves considerable effort and can only be successful if supported by offices operating locally and only if the transfer of information and updating is done by computer.

2. Census stages

2.1 Preparation of the census

ISTAT conducted a pilot survey from 26 November to 5 December 1989 in a limited number of municipalities in order to test the implementation of the census on a smaller scale and identify any items to be changed or improved.

The training of the enumerators, the operation of the peripheral network and the suitability and content of the questionnaire were the main items to be tested.

The survey was conducted with a sample of 1 600 holdings in 17 municipalities selected by applying the territorial representation criterion based on major districts and altitude zones as well as the number of agricultural holdings located in the municipalities themselves. The reference date for the survey was 26 November 1989 and the reference period was the farm year from November 1988 to October 1989.

The number of enumerators was to be the same as for the 1990 agricultural census and were drawn from among the municipality staff in municipalities with up to 400 holdings; in other municipalities, other persons were enlisted, irrespective of whether they worked for the public administration or not. On the basis of the results, improvements were made to the items in the questionnaire regarding the place of business of the holding and data on wine-growing. The provisions governing data collection were improved, in particular the items relating to the filling-in of the wine-growing section and the questions on hours worked by staff employed on the holding. The provisional organisational plan and the schedule for collecting the data were confirmed on the basis of the positive results of the pilot survey.

2.2 Local implementation of the census

The peripheral organisation responsible for implementing the agricultural census consisted of:

- a) the regional census commission, set up by the head of ISTAT, which has the task of ensuring that the tasks incumbent upon the census bodies can be implemented correctly and in due form at the regional level. It is also responsible for seeing that public relations work keeps to the targets set for the census;
- b) the provincial census committees set up by the prefects in all the provinces, whose task is to provide information on the proper, standardised application of the instructions issued by ISTAT for the implementation of the census; they are also responsible for monitoring the correct and punctual performance of the tasks allotted to the census offices on the basis of the reports submitted by the provincial offices on the progress of work as well as the reports submitted by the heads of the inter-municipal offices; if any irregularities occur during the census, these committees inform the competent census bodies so that the right action can be taken;
- c) the provincial census offices, which are responsible for ensuring the correct and punctual performance of the tasks which have been allocated to the municipal census offices; in their work they follow the arrangements established by ISTAT in line with the provincial committee's guidelines and the relevant schedule; the provincial offices draft weekly reports on the progress of the census, drawing from the reports submitted by the inter-municipal offices, and pass them on to the provincial committees; they also perform administrative and accountancy work allocated to them by ISTAT;
- d) the inter-municipal census offices, which provide the municipalities in their area of responsibility with technical assistance in updating the agricultural holding register, selecting enumerators as well as collecting and checking data; they provide training courses for the

senior staff of the municipality bodies and the enumerators; they draw up weekly reports on technical aspects of the implementation of the census and on the progress of the work of the municipal offices (a copy of the reports is sent to the provincial offices); they also review the holding questionnaires and provide technical assistance or take the necessary action if corrections need to be made to the questionnaires during the monitored census data registration stage;

- e) the municipal census offices which deal with various census-related procedures in their area of responsibility;
- f) the enumerators, selected from the municipality officials, whose task is to fill in the questionnaires with the data provided by the holder or, in his/her absence, another member of the family or other person qualified to furnish information.

One enumerator was appointed for every 400 agricultural, forestry or livestock holdings to be covered on the municipality's territory.

In municipalities with over 400 holdings to be covered, staff from other administrative bodies or organisations and persons from outside public administration were also used if the local members of the provincial committee felt there was a definite need for them. The enumerators were appointed after attending a training programme given by the head of the inter-municipal office on the census arrangements and on the provisions governing the filling-in of questionnaires.

VII. STATISTICAL CONFIDENTIALITY OF TABULAR RESULTS

Municipal tables subject to statistical confidentiality do not contain any data on specific characteristics relating to individual holdings. As a result, the totals of some tables do not tally with the sums of the individual entries.

VIII. NATIONAL DIFFERENCES

1. Scope of survey

The 1990 national agricultural census covers all agricultural, forestry and livestock holdings, irrespective of size and type of management. The scope of survey of the agricultural census exceeds that of the EC structure survey.

The survey unit for EC structure surveys is the agricultural holding. Agricultural holdings are economic units comprising arable land (including non-contiguous parcels) and, as the case may be, various plant and equipment, in which agricultural, forestry or livestock production is carried out by a holder, i.e. a physical person, company or organisation that bears the risk either individually (owner/occupier or holder with employees and/or partners) or in some form of share-cropping system.

The definition of the survey unit for the EC Structure Survey is identical to that of the survey unit for general agricultural censuses. It generally tallies with the Community definition of an agricultural holding which is referred to as being a single unit, both technically and economically, which has a single management and produces agricultural products.

The following holdings are concerned by the scope of survey:

- holdings with a utilised agricultural area (UAA) of at least 1 hectare,
- livestock holdings or livestock holdings in combination with forestry,
- holdings with less than 1 hectare of UAA whose marketed production is normally worth at least 1 million lire per farm year.

2. Legal form and management of the holding

In Italy, holdings managed by the following count as:

- holdings run by natural persons:
 - * individual persons,
 - * groups of individual persons (married couples, siblings, joint beneficiaries under a will or intestacy), managing the holding together,
 - * de facto companies and
 - * communities and lease communities;
- holdings run by legal persons:
 - * cooperatives,
 - * joint stock companies,
 - * partnerships,
 - * limited partnerships,
 - * limited liability companies,
 - * corporate bodies,
 - * regional authorities (domains, regions, provinces, municipalities etc) and
 - * corporate and public non-profit institutions (hospitals, municipal institutions, religious institutions and orders, prisons, agricultural colleges etc).

3. Survey characteristics and particularities

On the basis of the methods and definitions agreed at Community level and used for the census allowing full comparability of data on types of use of holding areas and main types of crops with the data from the 1982 agricultural census and the previous surveys of 1985 and 1986, as well as with the data of current agricultural statistics, the data for the areas under various crops of the farm year 1 November 1986 to 31 October 1987 were collected separately for main crops and secondary crops.

The following were regarded as main crops:

- a) the single crop, i.e. cases where only one crop was grown in the UAA during the farm year;
- b) combined crops

- * cultivation of several annual crops (arable crops or grassland) in the same field at the same time.

In this case each associated crop was listed in the "Main crop" column with reference to its actual share of the area. If, for example, maize and potatoes were grown in combination on 1 hectare of land and the area actually used for maize was 0.70 ha and the area under potatoes 0.30 ha, 0.70 ha was entered in the column "Main crop" under the heading "maize" and 0.30 ha listed under the heading "potatoes", as though they had been separate crops;

- * cultivation of permanent crops and/or forestry plants in the same field at the same time and growing of different types of annual crops in one and the same field.

In this case, each type of crop was recorded in the "Main crop" column with the actual area used.

If, for example, olive and almond trees (plants or rows of plants) were grown together on a hectare of land in a proportion of 60 to 40%, 0.60 ha were to be entered under the heading "olive trees" and 0.40 ha under the heading "almond trees". If olives and durum wheat were grown as combined crops on a hectare of land and the olive trees actually occupied 0.30 ha, whereas durum wheat occupied 0.70 ha, 0.30 ha were to be entered in the column "Main crop" under the heading "olives" and 0.70 ha under the heading "durum wheat production".

Where annual or permanent crops were combined with forestry plants, the area actually worked was to be indicated;

c) The following secondary crops (crops following the main crops)

- * In this case, the cultivation was to be entered under the heading "Main crop" with the total cultivation area used. If, for example, the type of cultivation on 1 ha for the main crop, soft wheat, and for the subsequent secondary crop, temporary grassland, and soft wheat was the more important crop, in the column "Main crop" the total area of 1.00 ha was to be entered under the heading "soft wheat" whereas the same area of 1.00 ha was to be entered under the heading "temporary grassland" in the column "secondary crop".

IX. LESS-FAVoured AND MOUNTAINOUS AREAS

The designation and territorial designation of provinces and municipalities refer to the reference date of 21 October 1990. The classification of municipalities into altitude zones was based on the criteria set out in the ISTAT publication *Circoscrizioni statistiche, Metodi e Norme serie C* (Statistical districts, methods and provisions series C) No.1 of August 1958.

X. PUBLICATIONS

In Italy, there are plans to issue special publications of the final results of the fourth general agricultural census which are of major and more general interest. The tables will also be provided on floppy disks and be of adequate standard to allow further processing by users.

Also available to users are further data of special interest in the form of tables, magnetic tapes and floppy disks.

Apart from the above forms of dissemination, the ISTAT databank which contains time series is available for access. A special processing method (TABISTAT) allows statistical tables which are not available in the above media to be produced at the user's request.

Information on the evaluation of results can be obtained by users from a publication which also contains all the tables processed and compiled by ISTAT which can be supplied on request.

Publications are divided up as follows:

1. Characteristics of agricultural holdings - provisional results:
(1 volume for the entire country)
2. Structural characteristics of agricultural holdings:
volumes for the provinces
volumes for the regions
1 volume for the entire country
3. Typological characteristics of agricultural holdings:
volumes for the regions
1 volume for the entire country
4. Area characteristics of agricultural holdings:
(1 volume for the entire country)
5. Survey documentation

LUXEMBOURG

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- X. PUBLICATIONS

I. INTRODUCTION

Surveys on the structure of agricultural holdings have been carried out in Luxembourg annually since 1953. They also form the basis of the EC structural survey which has to be carried out every other year. Participation in Community surveys has led to the adoption of the Community legal basis for national statistics.

The characteristics surveyed in the annual agricultural census on 15th May are land use, livestock, farm labour force and certain agricultural machinery and equipment.

Reference date for the characteristics of land use, livestock as well as certain agricultural machinery and equipment is the 15th May. The reference period for the farm labour force is the 12th months preceding the survey. Questionnaires must be returned to the statistical office by 25th May.

The agricultural census in May also provides the information on areas under crops which is to be forwarded to Eurostat every year.

Other Community-Surveys carried out at least once a year are the surveys of the number of cattle (May/June and December), of the number of pig (in April, August and December) and the census of the number of sheep and goat (in December). As the pig population is less than 3 million, Luxembourg does not have to carry out the census on pig population in April and August.

Table 1: Livestock survey programme

Reference date	Characteristics	Survey type F = exhaustive survey S = sample survey	Periodicity
3 April May 1) 3 August	Cattle, pigs, sheep, horses and poultry	F	1989, 1990, ff.
3 December	Cattle, pigs, goats and sheep	F	1989, 1990, ff.

1) The characteristics are surveyed in the annual agricultural census.

Information on the number of cattle needed for the census in May is collected from the annual agricultural census.

II. LEGAL BASIS

The legal basis for the national surveys is the STATEC Law of 9th July 1962, which provides for the establishment of a central statistical office, the "Service central de la statistique et des études économiques" (STATEC), and empowers this office to carry out statistical surveys. The Règlement ministériel of 31st March 1982 lays down the date and coverage of the surveys, the reference period, the periodicity, the implementing provisions, and the characteristics to be covered.

III. PERIODICITY

The survey on the structure of agricultural holdings is carried out on 15th May each year.

IV. SURVEY UNIT AND FIELD OF REPRESENTATION

The following units are covered:

- a) all holdings with 1 hectare or more of cultivated area (cultivated area covers arable land, meadows, pastures, gardens, fruit and berry plantations, vineyards, nurseries and osieries);
- b) all owners of commercially operated units producing vegetables, fruit or flowers, and owners of nurseries and osieries, even if the cultivated area is less than 1 hectare;
- c) all owners of vineyards with a total area of at least 10 ares;
- d) all owners of commercial livestock- or poultry-breeding establishments.

The survey does not cover holdings with less than 1 hectare of cultivated area which:

- possess woodland and "Lohhecken" (coppice woodland with a high proportion of oak);
- keep riding horses;
- fatten pigs for their own requirements;
- grow vegetables, strawberries etc. for their own requirements.

Data from the survey are recorded according to the locality of the holding. All areas farmed have to be mentioned, irrespective of whether they are in the same municipality as the holding, in other municipalities of the Grand Duchy or outside the country.

Rented areas have to be entered by the tenant, not by the owner. Grassland and other cultivated areas whose yield is subsequently auctioned are to be declared by the party which has the right of disposal over the land on 15th May.

Only such holdings as are under an obligation to provide information under the above provisions have to declare livestock numbers.

All the holdings covered by the survey are shown in the national system of tables. The coverage of the survey and that of the results are identical.

V. SAMPLING PLAN

The annual agricultural census in Luxembourg is carried out as an exhaustive survey.

VI. ORGANIZATION AND IMPLEMENTATION

1. Register of holdings

A uniform register of holdings is not kept. Each year the municipalities generally employ the same locally resident enumerators, each of whom is allocated the same survey district as in the previous year. These enumerators are therefore familiar with the number and location of the holdings to be surveyed and are given the blank questionnaires for carrying out the survey. Some municipalities with a largish number of holdings keep an address list containing only the addresses of the holdings surveyed the previous year.

2. Administration of the survey

2.1 Preparation of the survey

STATEC is responsible for the methodological, technical and organizational preparation of the survey (drawing up the questionnaire and other survey documents, checklist and list of municipalities, specification of tables and development of data-processing-programs etc.).

2.1.1 Questionnaire

All the characteristics of land use, livestock, labour force and agricultural machinery and equipment are recorded on a single questionnaire. The questionnaire and all the other survey documents (checklist and list of municipalities) are drawn up by STATEC. The questionnaires are printed by a private firm.

2.1.2 Development of the table schedules

The national system of tables was developed by STATEC and comprises:

1. a general review of the results of previous surveys for Luxembourg as a whole,
2. the results by size classes of the utilized agricultural area and by type of farming,
3. at the level of the cantons and Luxembourg city, the number of holdings and the utilized agricultural area;

4. at the level of the whole of Luxembourg, the characteristics of land use, livestock, labour force as well as characteristics on agricultural machinery and equipment.

2.1.3 Writing of data-processing-programs

The specification, writing and documenting of the programs applied is the responsibility of the Data Processing Division of STATEC.

2.2 Execution of the survey in the field

The agricultural censuses are carried out in Luxembourg on 15th May each year as exhaustive surveys. They are comprehensive surveys, and all data on land use, livestock, agricultural machinery and equipment relate to this reference date (15 mai). The reference period for the farm labour force is the 12 months preceding the agricultural census. All the characteristics are recorded on a single questionnaire, which is designed by the "Service central de la statistique et des études économiques" (STATEC) and sent to the municipalities.

The responsibility for preparing and conducting the survey in the municipalities rests with the local council's board of aldermen ("Schöffenkollegium", composed of the mayor and at least two councillors). For carrying out the survey, this body calls on enumerators with local knowledge who are familiar with the matter in hand. They receive the questionnaires, which they distribute to the holdings for completion, and a checklist. The questionnaires are collected from 20th May onwards by the enumerators on the spot (occupiers of holdings may also submit the questionnaires directly to STATEC), the enumerator making a first check on the spot of whether they are complete and correct. All the entries on the survey characteristics are transferred by the enumerator from the questionnaire to the checklist and are again checked. The enumerators then calculate the total for each characteristic in his survey district. The checklist and questionnaires must be returned to the local council by 25th May. Here documents undergo further manual checking by the board of aldermen to establish that they are complete and correct. The results from the survey districts are also aggregated at municipality level into section and municipality results, which are entered in the municipal list. All the documents (completed questionnaires, checklists and municipal lists) are to be received by STATEC by 5th June.

Completion of the questionnaire is compulsory, and failure to do so may incur a fine of up to Flux 25 000. Respondents are informed that the enumerators and all the other persons involved in the survey are bound by Article 7 of the Official Secrets Law of 9th July 1962 not to disclose the information supplied. Such information may be used for statistical purposes only. In the Grand Duchy there are normally no cases of refusal to provide information.

2.3 Plausibility check and compilation of tabular results

On receipt by STATEC, the documents are once again manually checked for completeness and correctness and are transferred to electronic media. The data are then tested for plausibility by means of a computer program developed by STATEC and, if necessary, corrected until all data are impeccable. The tabular results are then drawn up and published in the STATEC Bulletin.

2.4 Structure of the survey

All data relevant to the agricultural census in May (characteristics of land use, livestock, labour force and the machinery and equipment) are collected by a single questionnaire.

VII. STATISTICAL CONFIDENTIALITY OF THE TABULAR RESULTS

There are no procedures to ensure confidentiality, whether manual or computerized.

VIII. NATIONAL DIFFERENCES

1. Survey unit and field of representation

The survey unit and the field of representation of both EC-Structure-Survey as well as the agricultural census cover agricultural holdings within the limits given in point IV.

2. Legal form and management of the holding

Natural persons:

Individuals and certain groups of persons: spouses, siblings and heirs.

Legal persons are:

The State, communes, unions of communes, public bodies and public utilities, civil and commercial law companies, agricultural associations, non-profit making bodies.

3. Classification methods

At national level, holdings are classified only by size class of the utilized agricultural area (UAA) and, in accordance with the Community system for classifying agricultural holdings, by type of farming. Owing to the small number of holdings, data are recorded at level 1 only (8 general types of farming). Holdings are not classified by economic size (using the standard gross margin) for national purposes.

4. Annual Work Units (AWU)

In the national survey also, work done by each person fully employed on the farm and doing agricultural work is expressed in Annual Work Units (AWUs). It is recorded for the holder, the holder's spouse, other family members of holders, non-family labour (employees, male and female farm workers) and day-labourers. Any person who works on the holding for an average of at least 8 hours a day on 275 days is deemed to be fully employed in the holding. Persons under 15 and over 80 are not regarded as belonging to the labour force.

5. Survey characteristics and special cases

The table 2 shows the characteristics which are not surveyed in Luxembourg because they do not exist or are optional.

Table 2: Characteristics which are not surveyed in Luxembourg

Code	Characteristic
D/02	Durum wheat
D/06	Grain maize
D/07	Rice
D/13/a	Tobacco
D/13/b	Hops
D/13/c	Cotton
D/13/d1/b	Sunflower
D/13/d1/c	Soya
D/13/d2	Aromatic plants, medicinal and culinary plants
D/13/d3/a	Sugar cane
F/02	Rough grazings
G/01/b	Plantations of fruit and berry species of subtropical climate zones
G/02	Citrus plantations
G/03-G/03/b	Olive plantations
G/04/b	Other wines
G/04/c	Table grapes
G/04/d	Raisins
G/07	Permanent crops under glass
I/01/a-I/01/c	Successive secondary crops
I/02	Mushrooms
I/03/a	Irrigated area
I/03/b-I/03/b/10	Cultivated area irrigated at least once a year
I/05-I/05/d	Combined (associated) crops
L/10	Days worked by persons not employed directly by the holding

For national purposes, the following additional characteristics are surveyed in Luxembourg:

- muck spreaders, vacuum tanks for liquid manure, self-loading trailers, high-pressure or baling presses
- machinery used by two or more holdings (machinery syndicates, mutual aid etc.);

- surface silos, tower silos, computer-controlled feeding systems, liquid manure storage facilities (number, m³ and resulting storage period in months), as well as type of livestock housing (for dairy cows, pigs) and the dung-channel cleaners installed in them;
- information on social security
- building investment and
- the succession situation.

IX. LESS-FAVOURED AREAS

1. Legal basis

The legal basis for the definition of less-favoured areas in Luxembourg is the

- Council Directive of 28 April 1975 (75/268/EEC) on mountain and hill farming in certain less-favoured areas,
- Council Regulation (EEC) No 797/85 of 12 March 1985 on improving the efficiency of agricultural structures.

2. Demarcation and grouping of territorial units

According to Article 3 (4) and (5) of Council Directive 75/268/EEC a distinction is made between two categories of areas which are classed as less-favoured for Luxembourg.

a) Less-favoured agricultural areas

These categories of areas are defined as follows:

- low soil fertility:
 - 90% used for growing animal feedingstuffs; the maximum livestock density is 1.19 LU/ha (0.95 LU/ha when account is taken of bought-in feedingstuffs), and wheat yield is 31q/ha;
- below-average productivity:
 - the net product per member of the farm labour force is less than 80% of the Community mean;
- low population density:
 - 75 inhabitants/km², and the lowest percentage of the population engaged in agriculture is 15.1%.

b) Mountain areas

These suffer from unfavourable natural conditions (particularly heavy, damp soil) and disadvantages to agriculture as a result of their use for tourism. The total extent of these areas may not exceed 2.5% of the total area of Luxembourg.

As the total of the utilized agricultural area in Luxembourg (except vineyard areas) is considered as less-favoured area, no list of the municipalities concerned is supplied and holdings are not coded.

X. PUBLICATIONS

The results are published in the STATEC Bulletin. Results are published by canton, Luxembourg city and for the Grand Duchy of Luxembourg as a whole (see VI.2.1.2).

NETHERLANDS

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I. INTRODUCTION

Surveys on the structure of agricultural holdings have been carried out in the Netherlands annually since 1934. They also form the basis for the biennial EU structure surveys.

The agricultural census carried out every spring covers characteristics such as land use, livestock and agricultural labour and a series of other characteristics. The purpose of this census is twofold. One purpose is to obtain full and precise statistics on the structure of farming and farms in the Netherlands. Secondly, the census provides the Ministry of Agriculture, Nature Conservation and Fisheries with data by holding to be used for implementing agricultural policy. Since the first Community structural survey in 1966/1967, the statistical data from the censuses conducted in the years to which an EEC Regulation applies have also been made available to Eurostat - in tabular form up to 1987 and in the form of data on individual holdings from 1990 onwards (when the EUROFARM project was introduced).

The agricultural census carried out in spring also provides the information on areas under crops which is to be forwarded to Eurostat every year.

Other surveys carried out at least once a year are the sample surveys of the cattle population (1 July and 1 January of the following year) and pig population (1 April, 1 August and 1 December). Data on the sheep and goat population are taken from the agricultural census and corrected for the changes which occur in the period between May and December. The basis for drawing the sample is the set of data with the details of the individual holdings from the preceding agricultural census.

Table 1: Livestock survey programme

Reference date	Characteristics	Survey type F = exhaustive survey S = sample survey	Periodicity
December	Pigs	S	Annual
1 April of next year	Pigs	S	Annual
1 August of next year	Pigs	S	Annual
1 January of next year	Cattle	S	Annual
1 July of next year	Cattle	S	Annual

II. LEGAL BASIS

For the Netherlands, the basis for the obligation to supply complete and correct data for the census is Article 24 of the Law on Agriculture of 1957. The census is carried out every year under a decision from the Minister for Agriculture, Nature Conservation and Fisheries, based on the Law on Agriculture.

III. PERIODICITY

Agricultural censuses are conducted every year in the period between the end of March and the beginning of June. The reference date is the day of the survey.

IV. SCOPE OF THE SURVEY

The census covers the recorded holdings of persons (including legal persons) who earn their living wholly or partly from agriculture, and whose main holding premises are in the Netherlands.

Only holdings which at the time of the census are 3 NGE (nederlandse grootte eenheid - Dutch units of measurement) in size or greater are surveyed. Holdings which might only temporarily be smaller than 3 NGE are also included. For a description of the NGE see chapter VIII.

In the case of holdings in border municipalities with buildings or the main building on the territory of the Netherlands and part of the land on foreign territory, the survey covers both the area in the Netherlands and the area in the other country, with the crops and livestock. Conversely, the survey does not cover holdings in border municipalities with buildings or the main building in the other country and with part of the land on the territory of the Netherlands.

The survey assigns to a holding not only the owned or leased land and the buildings on it, but also buildings elsewhere which are used for the holding and leased arable land.

V. SAMPLING PLAN

1. Basis of sample plan

The annual agricultural censuses are carried out in the Netherlands as full-scale surveys. Up to and including the 1987 EEC survey on agricultural structures the statistical data were forwarded to Eurostat also on the basis of a full-scale survey, and in the form of statistical tables. Since the introduction of the Eurofarm project, as from the 1990 survey of agricultural structures, the statistical data are forwarded to Eurostat on a sample survey basis, and in the form of data on individual holdings. Usually, after the census, a representative sample is taken for Eurostat. It is probable that this method will be used for the subsequent structure surveys (1993 to 1997).

In 1990 there were slight differences between the sample results and those of the census.

In the 1990 census, all characteristics except agricultural machines and equipment were exhaustively covered. Agricultural machines and equipment were covered by a sample survey.

The characteristics for farm machinery and equipment and the individual data forwarded to Eurostat were based on one and the same sample survey. This meant that the sample holdings had to be informed accordingly before the census. The individual data on these holdings which supplied the data on mechanization were forwarded to Eurostat.

2. Size of sample

Originally the sample total was restricted to 35 000 holdings. The sample was taken from the 1989 agricultural census records (total holdings = 127 400). A total of 124 900 holdings were covered by the 1990 survey.

Since account had to be taken of non-response, abandoned holdings and other changes between the two years, the sample size was increased by 5 000, from 35 000 to 40 000 holdings. After the content of the sample had been checked and corrected the final size was 38 000 holdings.

3. Stratification

The survey population is stratified by province (into 12 strata), size class (NGE class: 12 strata) and type of holding (8 strata). This gives a total of $12 \times 12 \times 8 = 1\,152$ strata. Since some types of holding in certain provinces are very few in number, a minimum number of holdings has been set per stratum. Accordingly, when the number of holdings in a strata falls below the minimum, all the holdings in the sample are included. This means that the sample fraction in these strata is 100% in these cases.

4. Grossing-up

A factor is determined for each holding. This factor is based on the random selection of the holding in 1989 and on a correcting factor. This correcting factor makes the number of holdings estimated on the basis of the sample tally with the actual population figures in the 1990 agricultural census.

VI. ORGANIZATION AND IMPLEMENTATION OF THE CENSUS

1. Register of holdings

1.1 Purpose of the register

Starting with the 1992 Agricultural Census, a new holding register was introduced by the Ministry of Agriculture, Nature Conservation and Fisheries. The principle of this new register is that a nationally uniformly-based 9-figure number is allocated to each holder, the number itself not containing any information. The Ministry of Agriculture, Nature Conservation and Fisheries uses the register for implementing regulations and conducting the annual agricultural census.

The system is also used for selecting samples and for specific studies of particular types of holdings, for example.

1.2 Legal basis

The legal basis for recording each person operating an agricultural holding is a regulation issued by the Landbouwschap (Agricultural Board) in 1955. The Board is an institution, established by law, which is managed by representatives from the employers' and employees' organizations. It is legally empowered to issue regulations which are binding on everyone who manages an agricultural holding.

The regulation of 1955 lays down that any person taking up management of an agricultural undertaking not less than 3 NGE in size must report this in writing to the Board within three weeks. For a description of NGE see Chapter VIII (Classification methods). The Board makes this register available to the Ministry of Agriculture, Nature Conservation and Fisheries.

1.3 Characteristics recorded in the register

The register kept at the Ministry of Agriculture, Nature Conservation and Fisheries contains the following characteristics:

- a system-free holding number,
- the forename, surname and address of the holder and the holding address,

- the characteristics from the preceding agricultural census,
- holders/holdings affected by national regulations, and
- other social and economic data about the holding.

This register is exclusively for administrative purposes.

At the Central Bureau of Statistics another register is kept which, apart from a system-free holding number, only contains data from the annual agricultural census. The register also contains supplementary information required for statistical purposes such as the holding size and type. To maintain confidentiality for individual data there is a further set of data containing the holding number and the holder's forename, surname and address. This register is used for implementing all agricultural surveys.

1.4 Management of the register

The holder has to inform the Ministry of Agriculture, Nature Conservation and Fisheries of any changes in his/her forename, surname or address so that the register can be updated. The changes are passed on to the Central Bureau of Statistics which then updates its data set.

The characteristics stored in the data set are updated after completion of the annual agricultural census.

2. Organisation of the survey

2.1 Preparation of the survey

Agricultural censuses in the Netherlands are prepared by the Central Bureau of Statistics (CBS).

2.1.1 Questionnaire

About a year before the census starts a meeting of a working party of the Committee on Agricultural and Food Statistics (CLVS) is held. This working party consists of representatives of various institutions and other bodies of the state and economic sector which have some connection with agriculture. At the meeting, the content of the next agricultural census is discussed. Proposals for changes, adaptations or supplements to the questionnaire can also be made. The results of the meeting give rise to a report to the CLVS which is also made up of representatives of the state and the economic sector dealing with the agricultural branch. This committee monitors all the CBS's agricultural statistics for the Central Statistical Commission, the highest body responsible for passing the CBS's statistical programme.

After receiving approval, the CBS orders the printing of the questionnaires. Before the census, the questionnaire is published in the state gazette as part of the ministerial decree pursuant to the law on agriculture. The decree also indicates the survey period.

2.1.2 Development of the schedule of tables

The characteristics on which data are collected each year in September remain for the most part unchanged so that there is no need to change the schedule of tables. New tables are developed by the CBS together with experts only when new characteristics are included.

At the request of users, tables can also be changed and new tables produced. Ad hoc tables can also be ordered by external and internal users. These are generally not incorporated in the standard schedule of tables. The standard schedule of tables is published once a year.

2.1.3 Creation of data-processing programs

The specifications are produced by the specialist department. The tables are programmed by the CBS. After the programs have been tested the new tables are produced.

2.2 Implementation of the survey at local level

The CBS is responsible for distributing the questionnaires to the provincial offices of the Ministry of Agriculture, Nature Conservation and Fisheries. This Ministry has a head office in each of the 12 provinces, and the provinces are divided into districts. There are a total of 39 districts in the Netherlands.

The provincial directors are responsible for distributing the questionnaires to the various district offices in their provinces. The heads of these offices are responsible for collecting the survey data. The farmers or their representatives receive a personal invitation on a "convocation form" to appear in person at the district office. A questionnaire is attached to this convocation form and the recipient is asked to complete the form as far as possible at home beforehand. The final version of the form is completed in the district office with the help of a census official.

2.3 Plausibility checks and compilation of tabular results

Since the 1992 census the data provided by the farmers have been input directly into an automated database. After the required data have been supplied the person concerned receives a print-out of his part of the data file for signature. This print-out is then used instead of the previous final form. These data files, on magnetic tape, are given an initial check for errors, and then sent to the CBS, where the data are converted electronically into statistical tables.

Farmers who do not respond to a (repeated) invitation receive a further questionnaire, which is sent to their home by registered post. They are bound to complete this truthfully and return it within 5 days. This concerns approximately 3% of persons registered.

VII. STATISTICAL CONFIDENTIALITY OF THE TABULAR RESULTS

The CBS's policy on protection (confidentiality) is that in published statistics no data must be given which could be traced back to an individual respondent. One of the reasons for this is that the confidential relationship between the CBS and the respondent must not be jeopardized, since this trust is a necessary condition for obtaining full replies to future surveys and to be able to make statistics from them.

In the case of the agricultural census, this also means that in various tables the lower regional levels of various tables are not published. Accordingly, in tables in which holdings are counted there are no data at the level of municipality and agricultural area. Tables containing only the values of headings, such as area under a certain crop, number of animals or the labour force, may well be published at municipality level.

Statistical protection is also achieved by aggregating categories or regional subdivisions. In the case of data at, for instance, municipality level, this means that where there is a certain minimum number of holdings in a municipality, this is combined with a neighbouring municipality.

VIII. NATIONAL DIFFERENCES

1. Scope of the survey

The survey threshold of 3 NGE (see Chapter IV) differs from the 1 hectare or more of agricultural area utilized for farming (Article 6(a) of Council Regulation (EEC) No 571/88 of 29 February 1988. Since the holdings which are smaller than 3 NGE together contribute less than 1% to the total standard gross margin for Netherlands agriculture within the meaning of Decision 85/377/EEC, this threshold complies with the one laid down in Article 6(a) of the Regulation concerned. The Commission is in agreement with the provisions in the Article concerned, in view of the method used to determine the threshold of 3 NGE.

2. Legal form and management of the holding

- Holdings operated by natural persons:
 - * individual persons,
 - * groups of individuals: married couples, brothers and sisters, joint heirships,
 - * partnerships: limited or otherwise.

- Holdings operated by legal persons:
 - * private: registered cooperatives, limited liability companies, joint stock companies,
 - * public:
 - ** ecclesiastical institutions, associations, public law foundations, public law bodies,
 - ** regional authorities: the state, province, municipality.

3. Classification methods

The holding typology used for EC agricultural structure surveys is entirely based on the Commission Decision (85/377/EEC) of 7 June 1985 establishing a Community typology for agricultural holdings, under which the size of holding is measured in European size units (ESU).

The holding typology used for national purposes is derived from the one used for EC agricultural structure surveys, but using NGE size classes instead of ESU size classes. Since the exchange rate between guilders and ecus fluctuates the Dutch size unit (NGE) has been introduced. In 1980 it was considered unacceptable that holdings in the Netherlands, as a result of inflation in other EC countries, could end up in another size class.

For the reference period 1980 1 ESU = 1 NGE and corresponds to a standard gross margin of ECU 1 000. Starting with reference period 1982 the NGE was deflated in the same way as the ESU, but not with the price trend of gross added value in the EC as a whole, but with price trends in the Netherlands.

This difference between the holding size in NGE and ESU is thus only a minor factor. For instance, the EC agricultural structures survey of 1990 1 ESU = ECU 1 200, whereas at that time for national purposes 1 NGE = ECU 1 235.

4. Survey characteristics and special features

A small number of the characteristics for the EC structural censuses were not included in the censuses since these either do not occur in the Netherlands or are optional.

In some cases the Netherlands list of characteristics is more detailed than the one for the EC census - for example, for vegetables and flowers under glass. Because more detailed SGM standards (per heading) are used, differences arise in the total calculated SGM values for vegetables and flowers under glass between the Netherlands and Eurostat figures. This problem is solved by giving Eurostat, in addition to the values for the EC characteristics (in this case, the total area under vegetables and the total area under flowers) the measured SGM values of these EC characteristics (using Dutch standards). As a result, in future, for all EC characteristics, in addition to the surveyed values, the calculated SGM values will also be sent to Eurostat.

IX. LESS-FAVOURED AND MOUNTAINOUS AREAS

For various reasons it is not a practical proposition for the Netherlands to give in the structural survey data per holding on land in less-favoured areas.

Certain areas in the Netherlands are designated by the Government as "less-favoured areas/mountainous and hilly areas", although farmers are not always aware that their holding, or part of it, lies in one of these areas. These areas are often very small with unusual boundaries, sometimes cutting across holdings and municipal boundaries.

X. PUBLICATIONS

After each census, the CBS compiles a publication containing the various census data in tabular form under the title "Landbouwtelling 19XX" (19XX Agricultural Census).

There is a separate publication for the five-yearly censuses of farm equipment and machines, under the title "Mechanisatie in de land- en tuinbouw - 19XX" (Mechanization in Agriculture and Market Gardening - 19XX).

In addition, various other CBS publications give data in tabular form from agricultural censuses ("Maandstatistiek van de Landbouw" - Monthly Statistics on Agriculture; Landbouwcijfers 19XX" - Agricultural Statistics 19XX": "Tuinbouwcijfers 19XX" - Market Gardening Statistics 19XX, etc.).

Starting with the 1991 agricultural census data are also available on electronic media (diskettes). These are mainly total figures per municipality for the headings and data on the number of holdings, broken down in various ways.

("Landbouwtelling, editie 1991 (respectievelijk 1992), datadiskette" Agricultural census data diskette - 1991 (or 1992)).

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I. INTRODUCTION

In Portugal, the farm structure surveys are conducted either as full surveys or as sample surveys. In 1989, the agricultural census was conducted in Portugal for the fourth time, the previous censuses having been in 1952-54, 1968 and 1979 in mainland Portugal, in 1964, 1977 and 1985 in the Azores and in 1964, 1977 and 1986 in Madeira.

Up to 1979, the farm structure surveys had been conducted on the basis of the United Nation's recommendations for the agriculture and food sectors, but since the accession of Portugal to the European Community, they have been based on Community legislation.

II. LEGAL BASIS

The current legal basis for farm structure surveys is Council Regulation No 571/88 of 29 February 1988.

At national level, the National Statistical Institute is authorized, pursuant to Law No 6/89 of 15 April 1989 to carry out all statistical work, special provisions no longer being required.

III. PERIODICITY

Portugal carries out an agricultural census at roughly 10-year intervals. A sample survey of the structure of agricultural holdings was carried out in 1987 on the basis of Community legislation. Community legislation provides for a sample survey every two years as from 1993.

The 1989 survey in Portugal was carried out over the period October 1989 to February 1990, the reference period for the land-use and workforce characteristics being the crop year preceding the survey in each case. The characteristics concerning livestock relate to a particular reference date.

IV. SCOPE OF SURVEY

The survey units are holdings with:

- a) 1 ha or more utilized agricultural area (UAA)
- b) less than 1 ha UAA if the holding includes one of the following units:

Mainland Portugal

Area categories:

50 ares Specialized crops as main crop, including:
potatoes, vegetables, flowers, hops,
tobacco, seeds and bulbs for seasonal
crops, vineyards, orchards, olive groves
and nurseries
5 ares Flowers and ornamental plants
5 ares Greenhouses
5 ares Nurseries
10 ares Intensive vegetable growing
10 ares Seeds and bulbs for seasonal crops
20 ares Hops
20 ares Tobacco
20 ares Orchards
20 ares Vines

Animal categories:

1 Breeding bull
1 Cow
2 Bovines of two years and older
3 Pigs for fattening
1 Breeding sow
6 Sheep
6 Goats
10 Rabbits for breeding
100 Laying hens/ partridges for
breeding
10 Beehives, or the following animal
categories in the reference crop year

5 Bovines
5 Pigs
250 Geese
250 Turkeys
250 Guinea-fowl
500 Table chickens
500 Ducks

Azores

Area categories:

1 are Greenhouses
5 ares Horticulture
5 ares Vineyards
5 ares Orchards

Animal categories:

1 Breeding bull
1 Cow
2 Bovines of two years and older
3 Pigs for fattening
1 Breeding sow
6 Sheep
6 Goats
10 Rabbits for breeding
100 Hens for laying/breeding
10 Beehives, or the following animal
categories in the reference crop
year:

5 Bovines
5 Pigs
500 Table chickens

Madeira

Area categories:

1 are Banana plantations
1 are Flowers
1 are Space for selling pots of flowers
1 are Greenhouses with specific crops for sale
1 are Seed bulbs for arable farming
1 are Orchards
1 are Vineyards

Animal categories:

or the following categories in the reference crop year:

5	Bovines
5	Pigs
250	Turkeys
500	Table chickens
500	Ducks

V. SAMPLING PLAN

Since the 1989 agricultural census was a full survey no sampling plan was necessary.

1. Basis for selection

In 1987 the first sample survey was carried out, with the register of the holdings included in the 1979 agricultural census serving as the basis for sample selection.

2. Stratification

The stratification for the 1987 sample survey was based on the seven agricultural regions. The stratification characteristics and limits were determined on the basis of sampling methodology. The sampling plan comprised 17 strata based on the main type of farming and 3 strata based on size class (0 to 2, 2 to 16 and ≥ 16). The holdings were selected systematically. Fig. 1 shows, as an example the sample design for the "Entre Douro e Minho" region.

3. Grossing-up

The survey results are based on the extrapolation procedure.

VI. ORGANIZATION AND IMPLEMENTATION OF THE SURVEY

1. Holding register

1.1 Use of holding register

The holding register was used as an aid in the preparation (basis for sample selection) and implementation of the survey.

1.2 Characteristics to be included in the holding register

The holding register contains the following characteristics

- a reference number, allocated to holdings at random;
- name and address of the holder;
- land use, livestock and labour force figures.

1.3 Keeping of the register

The register of holdings in Portugal was originally based on the data on individual holdings from the 1960 agricultural census and it was updated on the basis of the information obtained in the 1987 and 1988 surveys. The register has also been checked and updated on the basis of data from the livestock census and the land-use survey. Data on newly-established holdings are mainly obtained by the interviewers carrying out agricultural statistical surveys since they are directly familiar with the field.

2. Survey stages

2.1. Preparation of the survey

The National Statistical Institute is responsible for the methodological, technical and organizational aspects of the preparation of the survey. This mainly comprises drawing up the questionnaires, developing the tabular programs and designing and producing the individual programs for storage, validation and processing of the data. The Ministry of Agriculture is also involved in this work, particularly as regards the way the data are collected, stored and validated.

2.1.1 Questionnaire

The National Statistical Institute draws up an initial draft of the questionnaire after consulting the individual users - particularly bodies working in agriculture. The final questionnaire is drawn up following various trials and a pilot survey.

2.1.2 Development of the tabular programs

As in the case of the questionnaire, a draft is first drawn up and sent to users for their opinion, after which the definitive tabular program is specified.

2.1.3 Computer programs

The computer department of the National Statistical Institute applies the programs for storage and validation of data in the agricultural regions and the autonomous regions of the Azores and Madeira. The tabular program is also programmed in the computer department of the National Statistical Institute.

2.2 Local implementation of the survey

The agricultural census/structure survey was carried out over the period October 1989 to February 1990 with the help of enumerators recruited locally. The statistical offices of the agricultural regions and the Azores and Madeira are responsible for recruiting, selecting and training enumerators for collecting the information requested in the questionnaires.

Holders are informed of the usefulness of the survey and of the fact that the provision of information is compulsory for the holdings included in the survey. Penalties of up to ESC 6 million may be imposed in the event of refusal to provide information.

2.3 Plausibility checks and producing tabular results

On receipt of the questionnaires, the data are checked manually before being transferred to a magnetic medium, after which a computerised plausibility check is carried out (approximately 400 checks). After all the questionnaires have been validated, they are transmitted to the National Statistical Institute on magnetic media for final checking and processing.

2.4 Structure of the survey

All the characteristics are covered by a single questionnaire. However, the questionnaire may be modified in the light of the characteristics of the individual regions.

VII. STATISTICAL CONFIDENTIALITY OF THE TABULAR RESULTS

The National Statistical Institute must observe statistical confidentiality. There are no computer programs for checking statistical confidentiality. This is done manually.

VIII. NATIONAL DIFFERENCES

1. Survey coverage

The Community and national surveys cover agricultural holdings as defined under section 4.

2. Classification procedure

In Portugal, the Community classification procedure is used for national purposes. For the typology, however, use is made of detailed standard gross margins because of the subdivisions of the Community characteristics, particularly for orchards.

3. Legal form and management of holdings

In Portugal, holdings run by natural persons include those run by individuals or by groups which run the holding jointly if they belong to the same household. Holdings run by legal persons include those run by the state, local authorities, public or public-utility establishments, companies under civil law and commercial enterprises, agricultural cooperatives and foundations.

4. Annual work units

The annual work units used for the EC structural surveys are also used in Portugal to determine the work input of a person engaged full-time in agricultural work on an agricultural holding. All persons working an average of eight hours per day for 275 days per year (1 annual work unit) are regarded as full-time workers.

5. Survey characteristics and particularities

A number of additional characteristics are covered in Portugal for national purposes. In the case of the agricultural census these were the following:

- irrigation and drainage systems
- marketing of products.

A more detailed breakdown was made for the following characteristics:

- permanent grassland and pasture
- agricultural machinery.

IX. LESS-FAVOURED AND MOUNTAINOUS REGIONS

1. Legal basis

The definition of less-favoured regions in Portugal is based on:

- Council Directive No 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas;
- Council Regulation (EEC) No 797/85 of 12 March 1985 on improving the efficiency of agricultural structures.

2. Definition and grouping of areas

Less-favoured agricultural areas are defined as those with:

- over 50% of the agricultural area has very limited production capacity;
- livestock less than 0.12 LSU per hectare of fodder area;
- a population density of fewer than 56 inhabitants per sq. km or an annual reduction in population of at least 0.5%. At least 30% of the active population must be working in agriculture.

Mountainous areas are defined as having:

- an altitude of at least 700 m (north of the Tejo) or 800 m (south of the Tejo);
- a gradient of at least 25% ;
- an altitude of between 400 m and 700 m together with a gradient of at least 20% (north of the Tejo) or an altitude of between 600 m and 700 m and a gradient of at least 15% (south of the Tejo).

Small areas

These are defined as areas which are naturally unfavourable to production (because of high soil salinity, poor accessibility or rock formations), high transport costs (on islands) and fragmented markets.

X. PUBLICATIONS

The results are published by the National Statistical Institute.

UNITED KINGDOM

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- III. FREQUENCY
- IV. SURVEY UNIT AND FIELD OF REPRESENTATION
- V. SAMPLING PLAN
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- X. PUBLICATIONS

I. INTRODUCTION

In the United Kingdom, surveys on the structure of agricultural holdings are carried out annually in the framework of a survey by post. These surveys form the basis for the biennial EC-Structure-Surveys.

All "main" agricultural holdings are surveyed in the annual **agricultural and horticultural census in June (the so-called "annual census")**. Census of the "minor" agricultural holdings are held about every 5 or 6 years. The distinction between main and minor holdings is detailed in Chapter IV.

The characteristics surveyed in the annual agricultural and horticultural census in June are land use, livestock and farm labour force.

A range of smaller sample surveys are held during the year to collect information on production and stocks and other specific topics. Much of the data required for the farm structure survey are taken from the so-called "annual census". However, the labour data necessary for EC-Structure-Surveys are collected from a special sample survey held only in EC-Structure-Survey years.

The agricultural and horticultural census at the beginning of June also provides the information on areas under crops which is to be forwarded to Eurostat. These data include the "minor" holdings which are estimated.

Other Community-Surveys carried out at least once a year are the census of the number of cattle (in July and December), of the number of pig (in April, August and December) and the census of the number of sheep and goat (in December).

The agricultural and horticultural census carried out beginning of June as well as the agricultural survey in December provide the information on the number of cattle which is to be forwarded to Eurostat. The data on the number of pigs are taken from the annual agricultural survey in December. Furthermore, each year in April and August the survey on pigs is conducted.

Table 1: Livestock survey programme

Reference date	Characteristics	Survey type F=exhaustive survey R=sample survey	Periodicity
April	Pigs	S	annual
August	Pigs	S	annual
December ¹⁾	Cattle and pigs	S	annual
June ²⁾	Cattle, pigs, sheep, goats, horses and poultry	F	annual

- 1) The characteristics are surveyed in the framework of the annual agricultural survey in December.
- 2) The characteristics are surveyed in the framework of the annual agricultural survey in June.

The four Agricultural Departments covering the United Kingdom (England, Wales, Scotland and Northern Ireland) are, in general, autonomous with each being responsible for their agricultural statistics. The information given in the following chapters is based mainly on the arrangements in England, but the other home countries use similar procedures.

II. LEGAL BASIS

In England and Wales the legal basis for the collection of agricultural statistical data is the Agricultural Statistics Act 1979 (as amended by the Agriculture (Amendment) Act 1984) which imposes a statutory requirement on all occupiers to complete and return their questionnaires. In Scotland the legal basis is the Agriculture Act 1947 and for Northern Ireland the Agricultural Returns Act 1939 (as amended).

The following censuses and surveys are designated as statutory:

- June Agricultural and Horticultural Census (known as the annual census*) (*)
- December Agricultural Survey (*)
- December Glasshouse Census
- October Census of Vegetables and Flowers
- Census of Minor Holdings - held every 5 or 6 years (*)
- Orchards Fruit Census - held every 5 years (*)
- Pig Surveys - held every April and August (*)

A number of voluntary censuses and surveys are conducted under the terms of the Government Statistical Service Code of Practice. The following are designated as voluntary:

- Cereals Production Survey - 3 times per year (*)
- Cereals Stocks Survey - 4 times per year
- Grain Fed to Livestock Survey - monthly
- Straw Disposal Survey - annually
- Oilseed Rape Production Survey - annually
- Dried Pea and Bean Production Survey - annually
- Turkey Census - annually
- Irrigation Survey - biennially
- Farmed Deer Survey - biennially
- Mushroom Survey - every 3 years
- Labour Survey - held in Structure years (*)
- Agricultural Machinery Contractors Survey - every 5 years

Only surveys marked (*) are conducted in all 4 countries.

All censuses and surveys are subject to regular review procedures.

III. FREQUENCY

The frequency of all Censures and Surveys is shown under Chapter II above (Legal Basis).

IV. SURVEY UNIT AND FIELD OF REPRESENTATION

The basic unit of enumerations is the holding. The guideline definition is pragmatic and operational and subject to agreement with the individual farmer. The holding comprises land on which agricultural activities are carried out and which is by and large farmed as one unit having regard to such supplies as machinery, livestock, feeding stuffs and manpower, and to distance between any separate areas of land involved and their type of farming. The farm business is operated by a "farmer" who is a single individual, a partnership of individuals, a limited company, or an institution of some kind. Some farm businesses occupy more than one holding.

There is a distinction between "main" and "minor" holdings. Both the annual agricultural census and the UK Structure Survey cover the main holdings only. Minor holdings are defined differently in England, Northern Ireland, Scotland & Wales.

In **England & Wales** a holding is categorised as minor if it meets the five conditions:

- a) The total area of the holding is less than 6 hectares.
- b) There is no regular whole time farmer or worker.
- c) The estimated annual labour requirement is less than 100 days.
- d) The glasshouse area is less than 100 square metres.
- e) The occupier does not farm another holding.

In **Northern Ireland** a holding is categorised as minor if it meets the three conditions:

- a) The total area of the holding owned or taken on long term lease is less than 6 hectares.
- b) The economic size of the holding is less than 2000 ECU defined by 1980 standard gross margins.
- c) There is no regular full time worker other than the owner.

Northern Ireland also excludes holdings which are wholly or mainly let out under the conacre system of annual letting and which no longer function as agricultural units. These were included in the Structure survey prior to 1990.

In **Scotland** a holding is categorised as minor if it meets the conditions:

- a) The total area of land is less than one hectare,
or
- b) The economic size of the holding is less than 2000 ECU defined by 1980 Standard Gross Margins,
and
- c) There is no regular full-time farmer,
and
- d) The holder does not farm another holding,
and
- e) The holding is not a large poultry unit.

Transfers of holdings between main and minor are normally made immediately after a minor holdings census. Such censuses take place roughly every five years in England & Wales and annually in Scotland and Northern Ireland. Many of the national results include estimated contributions for minor holdings.

V. SAMPLING PLAN

1. Basis of the Sampling Plan

The basis for drawing the sample is the set of data with the details of the individual holdings from the preceding so-called "annual census" (only main holdings). The sample survey on Labour Force is conducted to collect information on farm labour that is required for the EC-Structure survey but is not available from the annual agricultural census. The sample design is multi-purpose because it must provide good results for the whole of the EC-Structure survey which includes agricultural labour force, land use, livestock information, as well as machinery for agriculture. A summary of the sampling plan is given in table 2.

2. Stratification

Stratification is carried out regionally by the four countries, England, Wales, Scotland and Northern Ireland. There is also stratification by economic size (ESU). Stratification is based on the "standard gross margin", SGM, values of the holdings. The most recent SGM coefficients and the previous year's survey results are used to obtain the SGM values for holdings. A high SGM is associated with high activity. The stratification ensures that holdings with high activity are selected with high probability. Additional strata are used on an ad hoc basis to ensure good coverage of specialist enterprises and other important but less common enterprises. Separate stratification designs are used in England, Northern Ireland, Scotland & Wales. A summary of the sampling plan for the 1990 Structure Survey is given in Table 2.

3. Sample Frame

The register of holdings is used as the basis for the annual agricultural and horticultural census in June each year. The selection for the sample is from holdings that have been in existence for the past year. This ensures that they will be able to complete the questionnaire which requires information on farm labour force over the past year.

4. Extrapolation

The sample is raised to the main holdings population at the 1st June for the year of the survey. The extrapolation factors are calculated as the number of holdings in the population divided by the number of valid records within the sample for each stratum. Post-stratification is sometimes used to subdivide the selection strata before extrapolation, generally on the basis of farm business type.

VI. ORGANISATION AND EXECUTION OF THE SURVEYS

1. Register of holdings

1.1 Tasks of the register

The register of holdings is managed only by the four Agriculture Departments of the UK. It is used to provide a list of all agricultural holdings and to carry general information such as name of farm holder, address as well as Less Favoured Area status. The register is used in conjunction with data collected at the so called "annual census" to obtain optimal stratifications for each of the sample surveys. It is also used administratively for providing the names and addresses of holdings with particular types of livestock in the event of disease outbreak or for mail shots directed at certain holding types.

1.2 Characteristics recorded in the farm register

The following information is held in farm register:

- a systematic holding number stored for the duration of the existence of the holding and for longer,
- name with title and address of the holding,
- the type of holding (e.g. part of a multiple unit),
- the total land area of the holding,
- other general information relevant to the holding,
- grid reference (N.I. only).

1.3 Register management

Frequent changes in ownership and agricultural areas on holdings requires regular checking and updating of the list. This is a continuous process using information supplied by farmers at the so called "annual census" and from routine contacts through the administrative functions of the agriculture departments.

This procedure allows for the creation of new holdings, amendments to existing holdings, and consideration of those that may have ceased business, temporarily or permanently.

2. Course of the surveys

2.1 Preparation

The four agriculture departments of the UK (England, Wales, Scotland and Northern Ireland) are individually responsible for conducting their own Agricultural and Horticultural censuses. Questionnaires are designed by the respective agricultural departments separately as are specifications and programming of tables as well as processing of tabulars results. However, there is close liaison among the departments to harmonise the characteristics for collection and the wording of questions.

2.1.1 Survey forms

Although questionnaires for the Agricultural and Horticultural census are separately designed, by the four agriculture departments each department carries out extensive consultation with users of the data asking them to consider any changes to the previous years questionnaire. This process is carried out about 6 months before the census date so that proposals for change can be properly considered. Proposals for additional questions are considered carefully against the general policy of reducing the form-filling burden on farmers. After consultation, the questionnaire is designed in-house and then sent to printers.

2.1.2 Development of the tabular programmes

Computer programs exist to produce results at various stages of the census. In order to test these procedures results are produced after 25% of the forms have been returned.

2.2 Conduct of the survey in the field

The annual Agricultural and Horticultural census is conducted by post. Forms are despatched to farmers and horticulturists about mid-May with the intention that they should be completed on the 1st June and returned straight away. All farm holders are sent the questionnaire for completion and return, another identical form to keep as a record and a set of Notes for Guidance to help with completion. Forms are returned to Departments throughout the Summer and to hasten response reminder notices are sent out at regular intervals. Response rates taken for the UK as a whole are around 87- 90%.

Similarly, all other censuses and surveys are conducted by post, including the Labour Survey for Structure purposes.

2.3 Plausibility checking and production of results

A thorough check of returned forms is an integral part of the processing system. All forms are subject to manual scrutiny for completeness and legibility, followed by computer validation. This involves logic and consistency checks (including comparison with previous census data) and reconciliation of area information to the recorded area of the holding. Where appropriate, differences are resolved through telephone contact with the occupier of the holding.

Provisional results are produced after about 60% of the forms have been received and have cleared the checking procedures. The 60% sample is raised to produce population estimates. Provisional results are normally available by the end of August, three months after the census date. Final results are produced in the following December when data for non-respondents are imputed to produce a complete census record.

2.4 Construction of the "Digest of Agricultural Census Statistics"

The Digest of Agricultural Census Statistics brings together the main results of the annual Agricultural and Horticultural censuses held in parallel every June in England, Wales, Scotland and Northern Ireland. Even results are shown for each territory and for the United Kingdom as a whole over a ten year period. Results down to county level are also included. This provides the user with the basic statistics of farming: utilized agricultural area and arable land; numbers of main livestock types; and numbers and kinds of persons working on the holding. All figures relate to the situation on the holding on the census date; normally 1 June (or the first weekday in June).

VII. STATISTICAL CONFIDENTIALITY OF RESULTS

There are well established statistical confidentiality procedures in force in all UK Agriculture Departments to ensure that no data are published which might reveal information about an individual holding. These controls are adhered to for all censuses and surveys. Special attention is given to results showing low levels of aggregation (counties) where the holdings contributing to a particular cell are few in number. Cells with less than 3 holdings (5 holdings in Scotland) are suppressed or combined and all data are checked to ensure that values cannot be derived by calculating back from the total. Where this occurs further cells are suppressed.

VIII. NATIONAL DIFFERENCES

1. Survey unit and field of representation

Both the annual Agricultural and Horticultural census and the UK Structure survey cover main holdings but exclude minor holdings. However, the published results of the agricultural census include estimates for minors whereas the EC-Structure survey results do not.

2. Legal form and management of holdings

- Holdings run by natural persons:

- * Partnerships. These have no corporate status in England, Wales and Northern Ireland and count as several "natural persons". Under the more Romanized Scottish legal system, partnerships do have a separate legal existence but for the purposes of the survey are being treated as in the rest of the United Kingdom.
- * "Private companies" (according to German law they correspond to the GmbH): Although these have a separate legal existence, they are characteristically used for the incorporation of family businesses.

- Holdings run by legal persons:

- * Public companies, companies limited by guarantee, limited partnerships, government bodies.

3. Typology for agricultural holdings

There is an extended typology in use in the UK. The details are given in Annex 3.

4. Annual Work Units (AWU)

Annual work units are used only for the EC-Structure survey. National publications based on the so called "annual census" only show numbers of farm labour force within a certain category. These categories are quite different to those used in Structure and cover:

- Farmers, partners, directors, - wholetime, part time and total
- Wives/husbands of farmers, partners, directors, - total
- Salaried managers - total
- Family workers - wholetime and part time and by sex
- Hired workers - wholetime and part time and by sex
- Seasonal or casual workers - by sex

5. Survey characteristics and special features

Additional characteristics are surveyed in the National census compared with the EC-Structure survey. It is important to note that, in the so called "annual census", the concept of "Total Agricultural Area" is used as opposed to "Utilised Agricultural Area" (UAA) in the EC-Structure survey. The agricultural census definition includes; arable land, grass, bare fallow, rough grazing, woodland and any other land on holdings, including set-aside, not used for agricultural production, such as roads, yards and buildings. The Structure based UAA is not so all encompassing as it includes only arable land, kitchen gardens, permanent pasture and meadow, as well as permanent crops.

IX. LESS FAVOURED AREAS AND MOUNTAIN AREAS

1. Legal bases

The basis for defining disadvantaged areas in the UK is :

- the Council Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas
- the Council Regulation 797/85/EEC of 12 March 1985 on improving the efficiency of agricultural structures.

2. Delimitation and grouping of areas

Mountain areas

This classification is not applicable to the UK.

Less Favoured areas

The following codes are used to classify farms according to their Less Favoured Area (LFA) status:

SDA Severely Disadvantaged Area
DA Disadvantaged Area

- A. All land outside LFA (i.e. no SDA or DA land)
- B. All land in SDA
- C. All land in DA
- D. 50% or more of land in LFA, of which 50% or more in SDA
- E. 50% or more of land in LFA, of which 50% or more in DA
- F. Less than 50% of land in LFA, of which 50% or more in SDA
- G. Less than 50% of land in LFA, of which 50% or more in DA

Farms with codes B, C, D or E are classified as LFA farms.

Farms with codes B or D are classified as SDA farms.

Farms with codes C or E are classified as DA farms.

Farms with codes A, F or G are classified as non-LFA (or "lowland") farms.

These definitions were introduced for the 1993 Survey in Great Britain and the 1995 Survey in Northern Ireland. Previously farms with any LFA land were deemed to be LFA farms.

X. PUBLICATIONS

The main source of statistics from the annual Agricultural and Horticultural census is the publication, "The Digest of Agricultural Census Statistics". The content of this book is more fully described under Chapter VI, para 2.4. Other related official publications containing agricultural statistics are as follows:

- "Agriculture in the United Kingdom", MAFF (annual)
- "Farm Incomes in the United Kingdom", MAFF (annual)
- "Basic Horticultural Statistics for the United Kingdom", MAFF (annual)
- "Agricultural Market Report", MAFF (weekly and monthly prices)
- "Agricultural Price Indices", MAFF (monthly)
- "Economic Report on Scottish Agriculture" Scottish Office (annual)
- "Welsh Agricultural Statistics", Welsh Office (annual)
- "Statistical Review of Northern Ireland Agriculture", Department of Agriculture for Northern Ireland (annual).

Table 2: Structure Survey 1990

		Population (1990)	Sampling Fraction	Selection	Clean Response	Response Rate	Used Response	Representation Rate
ENGLAND	ZERO SGM (1980)	18598	0.08	1482	620	0.42	620	0.03
	1 - 3999	24079	0.35	8452	5693	0.67	5693	0.24
	4000 - 7999	13835	0.25	3490	2468	0.71	2468	0.18
	8000 - 15999	16352	0.31	4994	3585	0.72	3585	0.22
	16000 - 39999	29254	0.29	8494	6498	0.77	6498	0.22
	40000 - 99999	30972	0.44	13503	10669	0.79	10669	0.34
	100000 - 249999	14006	0.68	9469	7457	0.79	7457	0.53
	SGM 250000 over sub total	3556	0.97	3464	2776	0.80	2776	0.78
	150652		53348	39766				
WALES	ZERO SGM (1980)	3942	0.10	400	128	0.32	128	0.03
	1 - 3999	5595	0.37	2098	1272	0.61	1272	0.23
	4000 - 7999	3247	0.31	1000	666	0.67	666	0.21
	8000 - 15999	3818	0.37	1399	981	0.70	981	0.26
	16000 - 39999	7027	0.47	3302	2324	0.70	2324	0.33
	40000 - 99999	5223	0.67	3506	2478	0.71	2478	0.47
	100000 - 249999	757	0.93	703	474	0.67	474	0.63
	SGM 250000 & over sub total	37	0.86	32	19	0.59	19	0.51
	29646		12440	8342				

		Population (1989)	Sampling Fraction	Selection	Clean Response	Response Rate	Used Response	Representation Rate
NORTHERN IRELAND	0 (all let) SGM (1980)	8584	0.29	2490	1762	0.71	0	0.00
	0 (grass only)	3117	0.29	900	640	0.71	640	0.21
	1 - 3999	11572	0.29	3310	2456	0.74	2456	0.21
	4000 - 5999	11140	0.29	3250	2502	0.77	2502	0.22
	16000 and over	7577	0.29	5100	3327	0.65	3327	0.44
	sub total	41990	0.67	15050	10687		8925	
SCOTLAND		Population (main+minor)	Sampling Fraction	Selection	Clean Response	Response Rate	Used Response	Representation Rate
	0 - 4799 (SGM (1980))	7088	0.38	2715	867	0.32	867	0.12
	4800 - 9599	4677	0.20	935	531	0.57	531	0.11
	9600 - 19199	3480	0.25	870	697	0.80	697	0.20
	19200 - 28799	2655	0.30	797	624	0.78	624	0.24
	28800 - 47999	3839	0.40	1536	1115	0.73	1115	0.29
	48000 - 119999	6064	0.60	3638	2875	0.79	2875	0.47
	120000 and over	2052	1.00	2052	1510	0.74	1510	0.74
sub total	29855		12543	8219				

Notes:

- (1) The figures for Scotland are based on main plus minor holdings although the data was raised to the main holdings population only.
- (2) For Northern Ireland the sample was drawn and the survey conducted on the basis of all holdings in the main agricultural register. Subsequently the holdings which were entirely let out in short term lease were excluded from the population and from the survey.

Table 3: Typology of agricultural holdings (revised in 1992)

	General type of farming	Principal type of farming	EC-Classification [a]
1	Cereals		111, [1245]
2	General field cropping		121, 122, 123, 1243, [1244], 602, 603, 604, [6052]
3	Horticulture	Specialist Fruit	321
4		Specialist - under glass	2012, 2022, 2032
5		Horticulture - other	2011, 2013, 2021, 2023, 2031, 2034, 311, 312, 313, 314, 340, 601, 606
6	Pigs and poultry	Specialist Pigs	501
7		Specialist Poultry	502
8		Pigs and poultry - combined	503
9	Dairying	Dairying (LFA) [b]	411 (LFA)
10		Dairying (Lowland) [b]	411 (non-LFA)
11	Cattle and Sheep	Specialist Sheep (SDA) [b]	441 (SDA)
12		Specialist Cattle (SDA) [b]	421, 422 (SDA)
13		Cattle and sheep - combined (SDA) [b]	412, 43, 442, [4443]
14		Cattle and Sheep (DA) [b]	412, 421, 422, 431, 432, 441, 442, [4443]
15	Cattle and Sheep (lowland) [b]		412, 421, 422, 431, 432, 441, 442, [4443]
16	Mixed holdings	Cropping and Dairying	811, 812
17		Cropping, Cattle and Sheep	[8132], [8142]
18		Cropping, Pigs and Poultry	821
19		Cropping and mixed livestock holdings	822, 823
20		Mixed livestock holdings	711, [7122], 722, 723
	General types	Other types [c]	EC-Classification [a]
21		Specialist Mushrooms	2033
22		Specialist Set-aside	[1246]
23		Specialist grass and forage	[1247], [4442], [6051], [7121], [8131], [8141]
24		Specialist Goats	443
25		Specialist Horses	[4441]
26		Non-classifiable holdings: fallow	[91]
27		Non-classifiable holdings: other	[92]

Annotation:

- [a] Commission Decision No 85/377/EEC of 7 June 1985 establishing a Community typology for agricultural holdings with minor modifications to adapt it to United Kingdom conditions. These minor modifications are indicated by the EC farm type number being shown in square brackets.
- [b] Definitions of LFA, non-LFA, Severely Disadvantaged Area (SDA) and Disadvantaged Area (DA) are given in Chapter IX.
- [c] These types are separately identified in order to exclude them from sampling and weighting frameworks.

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- 5 Γεωργία, δάση και ολιεία (πράσινο)
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FI Eurostatin julkaisuluokitus**Aihe**

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- 4 Energia ja teollisuus (sininen)
- 5 Maa- ja metsätalous, kalastus (vihreä)
- 6 Ulkomaankauppa (punainen)
- 7 Kauppa, palvelut ja liikenne (oranssi)
- 8 Ympäristö (turkoosi)
- 9 Tutkimus ja kehitys (ruskea)

SARJA

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- B Suhdannetilastot
- C Laskennat ja kyselytutkimukset
- D Tutkimukset
- E Menetelmät
- F Tilastokatsaukset

DA Klassifikation af Eurostats publikationer**EMNE**

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- 3 Befolkning og sociale forhold (gul)
- 4 Energi og industri (blå)
- 5 Landbrug, skovbrug og fiskeri (grøn)
- 6 Udenrigshandel (rod)
- 7 Handel, tjenesteydelser og transport (orange)
- 8 Miljø (turkis)
- 9 Forskning og udvikling (brun)

SERIE

- A Årbøger og årlige statistikker
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- C Tællinger og rundspørger
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- E Metoder
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EN Classification of Eurostat publications**THEME**

- 0 Miscellaneous (pink)
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- 2 Economy and finance (violet)
- 3 Population and social conditions (yellow)
- 4 Energy and industry (blue)
- 5 Agriculture, forestry and fisheries (green)
- 6 External trade (red)
- 7 Distributive trades, services and transport (orange)
- 8 Environment (turquoise)
- 9 Research and development (brown)

SERIES

- A Yearbooks and yearly statistics
- B Short-term statistics
- C Accounts and surveys
- D Studies and research
- E Methods
- F Statistics in focus

NL Classificatie van de publikaties van Eurostat**ONDERWERP**

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- 5 Landbouw, bosbouw en visserij (groen)
- 6 Buitenlandse handel (rood)
- 7 Handel, diensten en vervoer (oranje)
- 8 Milieu (turkoois)
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SERIE

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SV Klassifikation av Eurostats publikationer**ÄMNE**

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SERIE

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- D Undersökningar och forskning
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- F Statistikoversikter

DE Gliederung der Veröffentlichungen von Eurostat**THEMENKREIS**

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- 6 Außenhandel (rot)
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- 9 Forschung und Entwicklung (braun)

REIHE

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- C Konten und Erhebungen
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FR Classification des publications d'Eurostat**THÈME**

- 0 Divers (rose)
- 1 Statistiques générales (bleu nuit)
- 2 Économie et finances (violet)
- 3 Population et conditions sociales (jaune)
- 4 Énergie et industrie (bleu)
- 5 Agriculture, sylviculture et pêche (vert)
- 6 Commerce extérieur (rouge)
- 7 Commerce, services et transports (orange)
- 8 Environnement (turquoise)
- 9 Recherche et développement (brun)

SÉRIE

- A Annuaires et statistiques annuelles
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- C Comptes et enquêtes
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- E Méthodes
- F Statistiques en bref

PT Classificação das publicações do Eurostat**TEMA**

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- 2 Economia e finanças (violeta)
- 3 População e condições sociais (amarelo)
- 4 Energia e indústria (azul)
- 5 Agricultura, silvicultura e pesca (verde)
- 6 Comércio externo (vermelho)
- 7 Comércio, serviços e transportes (laranja)
- 8 Ambiente (turquesa)
- 9 Investigação e desenvolvimento (castanho)

SÉRIE

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ISBN 92-827-8179-8

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This publication is the revised version of the volume published in May 1986: 'Farm structure: Methodology of Community surveys'.

The volume consists of two parts. The first part is dedicated to the methodology of the Community structural surveys in the period 1988 to 1997 and contains first a summary of the previous development of the Community surveys since 1966/67. Additionally, the Eurofarm system and some important methodical characteristics are represented.

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