



**FARM STRUCTURE SURVEY 1999/2000**  
**NATIONAL METHODOLOGICAL REPORT**

**Member State: FRANCE**

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## NATIONAL METHODOLOGICAL REPORT – FRANCE

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## SUMMARY

In France, the agricultural census took place in two stages. During the winter of 1999/2000, the municipalities, which are the basic administrative entities in the French system, were questioned initially so that the list of agricultural holdings could be drawn up.

Then, from 1 October 2000 to 31 January 2001, holdings comprising at least one hectare of agricultural area or “its equivalent” were surveyed. Questioning was conducted by individual interviewers and covered family and paid farm workers, holding size and status, the breakdown of crop rotations, livestock numbers, equipment and the economic environment.

France had a total of 664 000 holdings according to the completed 2000 census.

The implementation of the census (AC 2000) was entrusted to the Central Service for Surveys and Statistical Studies (Scees), which is the central statistics department of the Ministry of Agriculture. It was based on the specialist departments of the Ministry: the regional statistics departments (NUTS 2) and the local statistics departments (NUTS 3). As the local permanent officials were too few to cope with the overload of work which the census entailed, some 4 700 non-permanent staff had to be recruited and trained.

The census took place in seven major stages: preparation, compilation of a list of holdings to be surveyed, recruitment of temporary staff, training, collection, data validation and data dissemination.

The success of this major operation hinges mainly on close collaboration by farmers. In particular, an information and awareness campaign for the farming community was conducted to facilitate discussions with farmers.

The operation of compiling the list of holdings took place in four steps: the mobilisation and matching of files, known as “national files”; the drawing up of an initial list of holdings based on information derived from national files and other files used locally; the meeting of a local committee in each municipality; and finally, the capture of the information following transfer to the local committee and the latest modifications.

After an extensive consultation stage, the questionnaire was devised by a technical group composed of statisticians. Tests using the draft questionnaire then took place in the field, in all the departments, from 15 February to 30 March 1999.

From the tests, the contents of the definitive national questionnaire could be decided on, its presentation improved, assistance given in the drafting of the instructions and other training documents for interviewers. The statistical definition of “agricultural holding” did not undergo any major modifications.

The checking of the data, which was the last step before dissemination, began directly the collection stage commenced on the farmers’ premises. It then continued throughout the processing chain. Questionnaires were thus keyed in using capture/control software. This is a computer application which allows questionnaires to be keyed in while activating a series of checks as

capture proceeds. Checks on aggregated data finally supplemented the operation. They are based on probability checks on the variables of a set of questionnaires and no longer on variables of a single questionnaire as is the case in respect of the preceding stages.

The dissemination of the results of the agricultural census began in February 2001. On the basis of the definitive results, the central statistics department took over the preparation of national annotated products, and also the standard products of gross figures for all the geographical levels. At the same time, the figures were stored in our databases. This work is to be completed in early 2002.

The standard products of gross figures are intended to meet the commonest requests and they are available in the form of CD-ROMs, publications, A4 sheets and storage in the Datagreste database and on the Ministry of Agriculture's website (<http://www.agreste.agriculture.gouv.fr>).

To supplement the standard products of gross figures, two types of annotated products are produced: a "4-pager" and a "20-page" publication. With a view to the harmonisation and assistance to the regional and local services, standard models are proposed by the central level for these two media. They made a very rapid dissemination of the results possible.

## INTRODUCTION

Detailed knowledge of the structure of agricultural holdings dates back to the last agricultural census conducted in 1988/89, which was updated by the structure sample surveys of 1990, 1993, 1995 and 1997. Against a background of great mobility and flexibility among the agricultural community, the 2000 census was eagerly awaited. Its data serve as the basis for work to simulate economic measurement, as a key for the apportionment of certain appropriations managed by the departments and for the assessment of impact measures. The results allow complete data to be supplied on the structure of agriculture and to meet information needs at detailed geographical levels (NUTS 4, 3, 2). Finally, the census serves as a sample survey basis for the drawing of samples in later surveys.

The 2000 agricultural census is prescribed by European Union Regulations 571/88 and 1497/96. Since these regulations have ascendancy over national legislation, there is no compulsory requirement for a national law. European legislation is transposed to national law by a decree implementing both regulations and an Order delimiting the scope of the exhaustive survey. The opinions of the National Committee on Computerisation and Freedoms (Cnil) and of the National Statistical Information Council (Cnis) are vital for the signing of the implementing Decree. The Cnil's opinion is necessary so that a file of personal data can be drawn up. As for the Cnis, which is the advisory body in which the different social partners are represented, this gives an opinion on the advisability of the statistical operation and it provides a hallmark of the implementation conditions which guarantees compliance with the rules of the article. The decree prescribing the census was signed on 24 January 2000 (cf. Decree - Annex 1).

In accordance with Regulation 2329/98, France was able to benefit from the deferment of the date of the implementation of the viticultural census. Hence both operations took place together.

Acknowledged as being of general interest, the census is compulsory. An approval number (2000 x 005 AG) of the Minister of Agriculture and Fisheries and the Minister for Economic Affairs has been made available for this operation. In accordance with the Act on Statistical Confidentiality (51-711 of 7 June 1951), any failure to respond or giving a knowingly inaccurate response may entail the imposition of an administrative fine. The questionnaire is confidential and the persons involved in the census are bound by professional confidentiality. The Act on Information, Files and Freedoms (78-17 of 6 January 1978) guarantees the persons concerned a right of access and rectification in respect of the data concerning them.

The implementation of the census (AC 2000) was entrusted to the Central Service for Surveys and Statistical Studies (Scees) which is the Ministry of Agriculture's central statistics department. It was based on the specialist departments of the Ministry: the regional statistics departments (NUTS 2) and the local statistics departments (NUTS 3).

The municipalities, which are basic administrative entities in the French organisation, were firstly questioned with a view to the compilation of the list of agricultural holdings, a stage consisting of drawing up the "basic list" file.

Holdings of at least one hectare of agricultural area or “its equivalent” were surveyed. Questioning was conducted by an interviewer. It covered the family, and paid, agricultural population, the size and status of the holdings, the breakdown of rotations, livestock numbers, equipment and the economic environment. The census took place over the winter of 1999/2000 in the case of local committees organised to draw up the list of holdings and from 1 October 2000 to 31 January 2001 in the case of visits to all farmers. France had a total of 664 000 holdings as at the end of the 2000 census.

## **1. HUMAN RESOURCES**

### **1.1. National level**

The organisation of the 2000 agricultural census is based on setting up a national project with a main project and some sub-projects. At the heart of the organisation (with effect from March 1998), the specific statistics team oversees the entire operation. It is made up of two heads of statistics and an assistant who co-ordinates the entire activity.

Three other teams assist the statistics team: computing, communication and dissemination.

The specific computing team oversees computer work. Set up in March 1998 (cf. timetable of the main stages of the census - Annex 2), it comprises one head and two assistants (analysts and programmers). The specific communication team, which was set up in early 1999, is composed of one person, as is, finally, the specific dissemination team, which was set up later, in the spring of 1999.

The specific teams for statistics and computing were the first ones to be set up (March 1998). They work together throughout the operation. It is these two teams which are permanently involved from the beginning to the end of the project.

Along parallel lines, other units or persons from the Ministry of Agriculture are made use of. Thus the Administrative Bureau of the Statistics Department is responsible for budgetary aspects, such as the delegations of appropriations to departmental services, and regulatory aspects (employment contracts, for example). The Publications Bureau is in charge, in particular, of the printing of documents, duplication, the dispatch of materials, dealings with printers, etc. In two respects, the supervision of operations is delegated to two other units of the Department: viticulture is placed with the Office for Plant and Forestry Statistics and the census in the overseas departments to the specific unit responsible for the co-ordination of surveys in those areas. Computer scientists from the Ministry of Agriculture’s computer centre are heavily involved as managers of the network for the transmission of data linking the three geographical levels. These different units constantly work in collaboration with the statistics and computing teams.

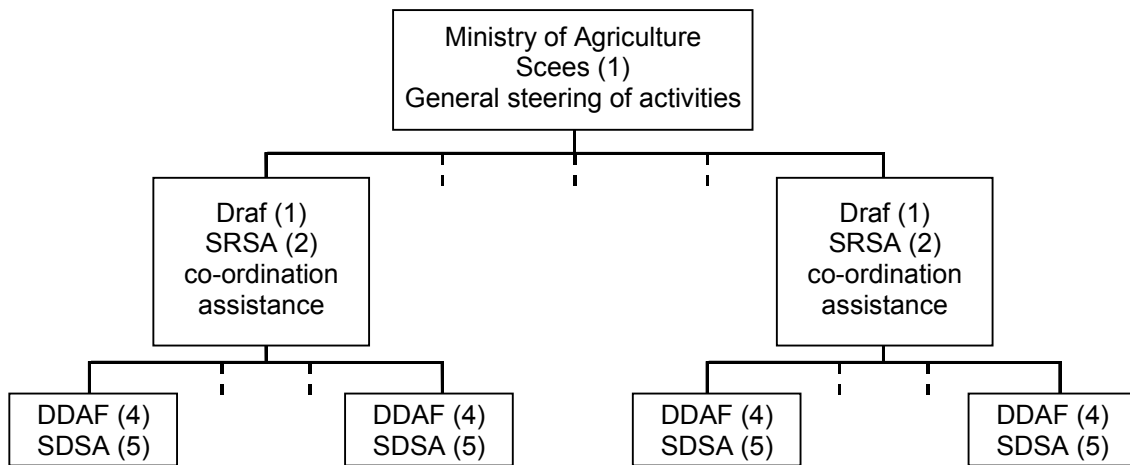
Certain tasks have been put out: the production of software, the mass printing of documents, the composition of documents, training groups, etc., either

because the Ministry of Agriculture does not have the requisite skills or because the team cannot cope with the workload.

A committee is responsible for monitoring the operation. Each month, it monitors the progress of the work, studies the necessary arbitrations, makes up the working parties, lays down their terms of reference and updates the operation timetable.

The organisation is completed by the establishment of numerous working parties which bring together officials from the local and regional statistics departments, who act as consultants and experts.

**The statistics services of the Ministry of Agriculture**



- (1) Scees : National statistics department
- (2) Draf : Regional Agriculture Directorate
- (3) SRSA : Regional statistics department
- (4) DDAF : Local Agriculture Directorate
- (5) SDSA : Local statistics department

**1.2. Field level**

In the field, the organisation is based on the specialist units of the Ministry of Agriculture, namely regional and local statistics departments. The regional departments, which are composed of eight persons on average (5 to 12), co-ordinate and assist the local departments, which are small teams of less than three persons that conduct the census work in the field. They are near the agricultural holdings and already manage a network of interviewers for the implementation of the current work programme. They are therefore in the best position to recruit additional interviewers in order to question all farmers when the census is taken.

The permanent officials of the regional local statistics departments are not numerous enough to cope with the overload of work represented by the census. It was therefore necessary to recruit non-permanent staff placed



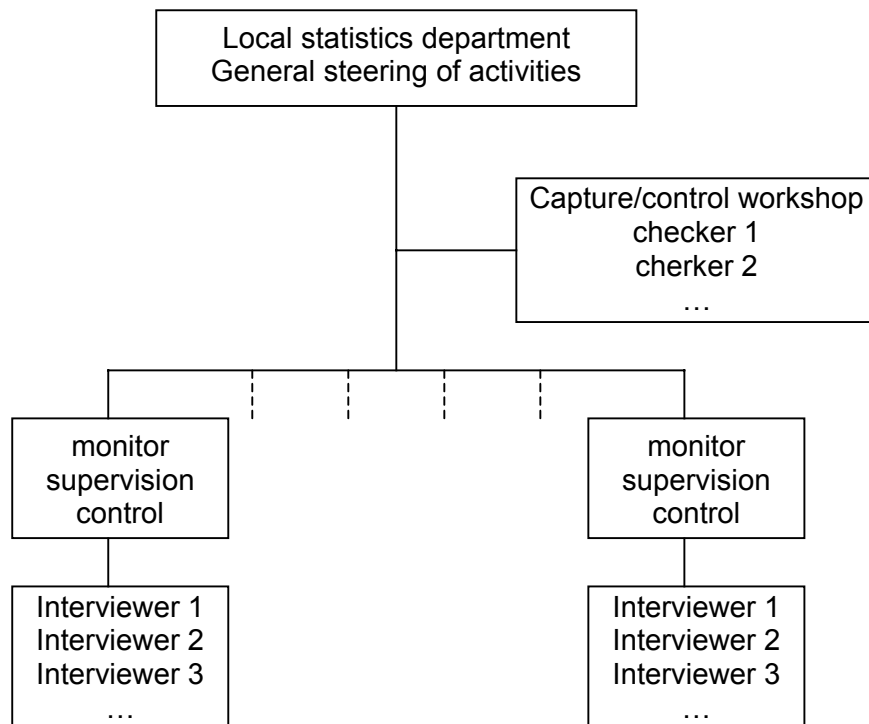
under the authority of the head of the local statistics service: interviewers, monitors and checkers.

Thus 3 800 interviewers were recruited and given the task of collecting information from the farmers during a direct interview and transcribing them onto questionnaires. Once they are completed, the questionnaires are sent to the local statistics department via the monitor. The interviewers attend meetings which are led by the monitor to whom they are attached. There they report their on their activity and advise the monitor of any problems encountered (refusals, complex cases, etc.).

475 monitors were recruited to supervise and lead a team of interviewers. They organise the activity of the interviewers (distribution and recovery of questionnaires) and ensure it is monitored. They also implement difficult surveys. They are the link between the local department and the interviewers.

Capture/control is in the hands of 430 checkers. This work involves them capturing all the data from the questionnaires sent by the monitors and checking these data having regard to error messages reported by the capture software. Unlike the interviews and monitors, they work on the premises of the statistics services. They therefore rapidly alert the local department in the event of any problem, such as a systematic error, a message it is not authorised to process, etc.

### Organisation of a local service



## 2. OPERATION TIMETABLE

The census took place in seven major stages: preparation, the drawing up of the list of holdings to be surveyed, the recruitment of temporary staff for the preparation of the “basic list” and for the collection stage, training, collection and the validation of data and their dissemination.

As part of the process of preparing the census, an extremely detailed timetable was drawn up at the end of 1997. From the simple list of tasks at the outset, the document filled out as time went on. The preparation of the budget then began with the uncertainties concerning the number of holdings expected, the need to revise the interviewers’ contracts and the taking into account of any special allowances which may be due on the basis of the social rules covering the precariousness of work. The teams from the permanent organisation were thus set up in March 1998. A national meeting was organised with all the regional and local statistics services in September 1998 to launch the operation and it was there that each of the players was made aware of the role he/she was to play.

The compilation of the list of holdings is intended to supply interviewers with a list of farmers to visit. This operation must result in an optimum list while avoiding omissions and double counting. The compilation of the “basic list” file took place in three stages. Initially (spring 1999), a study carried out nationally consisted of mobilising and matching existing national files. Secondly (autumn 1999), local statistics departments drew up an initial list of holdings on the basis of the information derived from the national files and other files used locally. This initial list was intended to be studied at the time of the survey in the municipalities (NUTS 4). At the third stage, the local departments, within their area of competence which corresponds to NUTS 3 level, organised the meeting of the committee referred to earlier to validate, refine and supplement the list prepared in the office. To do this, the interviewers were recruited from September to November 1999 and trained in December-January 2000. The committees, composed of several persons with competence in the matters concerned, including the mayor, met between 1 February and 28 April 2000.

At the same time, in 1998, an extended process of concerted action was set in train for the compilation of the questionnaire. Questionnaire tests among farmers took place from February to March 1999 throughout France. The questionnaire and instructions were subsequently finalised. The recruitment of interviewers, monitors and checkers began as from April 2000; they were trained in September/October before undertaking collection in the field from 2 October 2000 to January 2001.

Data capture took place as collection proceeded. The process is one of capture/control characterised by the activation of a set of controls at the time of capture. This stage was accompanied by a final validation of the data through the development of software for checking the aggregate data.

Once the data were validated, the provisional figures appeared (as from April). As for the definitive national data, these have been available since mid-July 2001. Dissemination of census data will be extended over a long

period (cf. catalogue of publications - Annex 3 and timetable of the main census stages - Annex 2).

### **3. COMMUNICATION**

The success of the important statistical operation represented by the agricultural census is based primarily on close collaboration from farmers. It was therefore decided to conduct an information and awareness campaign among the farming community, in particular to facilitate discussions with farmers. This information campaign was prepared using a company specialising in these techniques.

The strategy adopted is intended to create a favourable climate at the time of collection, by the promotion of the agricultural sector through the census. It is not limited to farmers only but does involve their social and occupational environment, through the basis substantially being the intermediaries and networks of the farming community (farming organisations, trade associations, farming press, etc.) and a wider public, including elected representatives and the local and regional press.

Communication measures run along nine main lines: an information dossier for mayors, an information campaign focusing on displays in a specialist rural network, a telephone enquiry line, a category on the Ministry of Agriculture's website, relations with the press, a fax message, a guidance note, a letter to farmers and activity by way of internal communication.

Mayors are involved in two ways with communication on the agricultural census. On the one hand, directly so in the stage entailing the compilation of the list of holdings and, on the other - like all elected persons - they are influential intermediaries and users of the census results. The communication to the mayors is therefore undertaken directly the operation for the "compilation of the basic list file" is embarked upon. They have received an information dossier which sets out in particular their role and the objectives of the census.

A poster campaign took place from October 2000 to January 2001 in metropolitan France (via the press in the overseas departments). It conveyed its message via notices in town halls and in places frequented by farmers (agricultural banks, social security offices for farmers, etc.). Cf. Notice – Annex 4.

The telephone enquiry line is based on the establishment of a telephone platform from mid-September 2000 to mid-February 2001. Pre-trained telephone advisers answered questions about the census.

A category devoted to the census was opened on the Ministry of Agriculture and Fisheries' website in April 2000. It was supplemented by a system of answering questions by e-mail as from September 2000.

Relations with the press were monitored via press releases and dossiers. Moreover, two press conferences chaired by the Minister and his entourage were held, one when the operation was launched and one when the initial results were disseminated.

The mobilisation of the intermediaries and networks of the farming community was triggered by a fax message on the census being regularly sent to these target groups of the public as from June 2000. Six issues were sent during the census period to inform our partners associated with the census regularly on how the operation was proceeding and collection work was progressing.

Communication via the interviewers took the form of supplying a guide which was handed to them at the time of training. This document sets out the role of the interviewer and provides advice on preparing interviewers thoroughly and answering survey questions.

Communication with interviewees was made by an announcement letter to farmers, accompanied by an information leaflet sent just before collection.

As for the internal communication aspect, a communication kit providing data for organising local communication measures targeting the internal and external public (including the press) was supplied to the officials responsible for communication in the regional and local units of the Ministry of Agriculture. This kit provides tools for relaying messages in connection with the communication campaign. Moreover, a telephone line was set up within the specialist company chosen to help us, to provide support regarding any question relating to the communication on the census as from March 2000. For the information of all the Ministry officials, regular articles were written in the house magazine and a specific intranet site was developed for this service.

By means of this organisation, the agricultural census took place in a climate of confidence with farmers.

## **4. COMPILATION OF THE “BASIC LIST” FILE**

### **4.1. Objectives of the compilation of the “basic list” file**

All the units defined as agricultural holdings must be surveyed. As a preliminary to the interviews among farmers, an operation involving setting up the “basic list” file [of holdings] to be surveyed called *Cle*, the acronym for *constitution de la liste des exploitations* [compilation of the list of holdings] therefore needs to be undertaken. This operation is conducted by the local statistics department and in the field, by a survey among town halls.

In the 1988 census, manual matching was carried out in the office between data from the preceding census (1979) and data derived from the social security documentation in respect of farmers (MSA - *Mutualité sociale agricole*), then the resulting list was validated in a local committee. In 2000, the procedures were closely similar to those in 1988, the main innovation being recourse to computer resources.

The aim of the “compilation of the basic list file” stage is to compile an optimum list of holdings. It must avoid two pitfalls: distinguishing several holdings where there is only one or neglecting very small holdings, which are at the limit of the thresholds.

Another objective assigned to this stage of work is preparing - by facilitating it - the capture of questionnaires collected in the course of the census itself. A computer file is generated at the end of the stage to initialise the capture software. Hence it is not compulsory for data relating to the identification of the holding and to its address to be captured. The capture operator must only check these areas and correct them if the particulars shown on the questionnaire differ.

The operation involving the compilation of the list of holdings took place in four stages: mobilisation and matching of three files, known as “national files”; the compilation of an initial list of holdings on the basis of information derived from the national files and other files used locally; the meeting of a local committee in each municipality and, finally, the capture of information arising from examination in the local committee and the latest amendments.

Software was developed and made available to local statistics departments, especially for the operation involving compilation of the list.

#### **4.2. National matching**

The reference file used is that of the Scees Permanent Sample Survey Basis. This file arose from the last census (1988) and was updated using the surveys conducted subsequently.

The use of the Permanent Sample Survey Basis alone is insufficient: updatings have been partial since they were often carried out on the basis of random sample surveys. Moreover, the statistics services have difficulty in acquiring a sound knowledge of new holdings and the frequent changes in status. This information therefore needs to be supplemented using other sources.

The use of farmers’ social security (MSA) files allows more recent data, and in particular small units not spotted elsewhere, to be recovered. The other advantage of these files is to provide information unavailable in the Permanent Sample Survey Basis, such as the apportionment of the area of the holdings by municipality or the list of co-farmers in the case of enterprises with members.

Finally, the central statistics department recovered data concerning agricultural holdings from the business index. Since 1996, the National Statistics Institute (Insee) has registered farmers in a list (on the basis of farmers’ social security files). One of the advantages of using this index is to recover the identifier in the census file. This identifier is intended to become the sole identifier of the holding in the different administrative systems which know it. The field covered by the index is, however, less extensive than that of the farmers’ social security documentation.

Centralised processing of data derived from the three national files made it possible to spot units “with a good likeness” among these files.

Comparisons of wordings applied to the name of the holding between units derived from the Permanent Sample Survey Basis and the index on the one hand and from social security documentation on the other resulted in proposing, where appropriate, one or more holdings spotted in the index or

the social security documentation for each holding of the basis. These holdings are termed “pre-associated”. This research work was carried out within each municipality.

### **4.3. Matching in the local statistics department**

Once this work of matching was carried out nationally, the local statistics departments recovered their files. Their work consisted of validating or rejecting the pre-associations offered by the computer. Where the proposals were not deemed satisfactory, the machine made it possible to seek other associations.

Local departments supplemented the list of holdings by using the files which were available and relevant locally. The sources used naturally vary from one department to another. Apart from the availability of a particular file, the choice was dictated by specific local features.

No unit was deleted during this initial phase: it was during the local committee [meeting] at the town hall that holdings which had disappeared or been absorbed by others were actually eliminated.

The software made it possible to integrate other units which were not present in one of the three national files and which came from sources used locally: for example, a beekeeper not registered for social security for farmers but known locally to the administrative authority and who is covered by the census.

### **4.4. Local committees**

The meeting of the local committee in each town hall is the key element in the stage involving validation of information derived from existing statistical files. It is nothing short of a survey, requiring a lot of care in its preparation and a great strictness in its implementation.

Management of the committee requires full control over a group debate. The survey in the town hall is not limited to a solid technical preparation of collection; another very important issue is the psychological preparation of the population concerned. In a number of small rural municipalities, a clear understanding by the mayor and committee members of the issues in a census allows the majority of farmers in the municipality to be part of, and cooperate better with, the agricultural census proper.

The composition of the local committee is of particular importance for the success of the operation. Apart from the mayor or a person representing him, it must be composed of a number of people with a good knowledge of the municipality’s population and the farming community (knowledge of the extent of municipal territory and of the structure and method of management of the holdings). For reasons of efficiency, their number must remain limited to four or five members.

The committees met between 1 February and 28 April 2000, in other words over three months, with 36 600 municipalities being involved during that time.

#### **4.5. Capture of the committee results**

Once the local committee stage is over, data are ready to be captured in the dedicated software. According to the organisation employed, it was used in the local statistics department or on a laptop equipped with a specific version and made available to the interviewers.

When capture is complete, the program allows the list of holdings for survey to be edited. This is the list which will be available to the interviewer in the field at the time of the collection stage of the census proper.

### **5. QUESTIONNAIRE AND INSTRUCTIONS**

#### **5.1. Definition of agricultural holding**

The statistical definition of an agricultural holding has been constant since 1955. It now co-exists with other administrative or statistical definitions, namely the legal definition of farming (farming by nature or by extension), social approach (definition of farmers' social security), aid files and the definition of the general statistical list. Community texts retain the general approach of previous surveys. As a result, the definition has not undergone any major modifications; on the other hand, the instructions have been set out in very specific terms to treat the most complex cases uniformly, in particular the break-up of units.

An agricultural holding is defined by Decree 2000-60 and the Order of 24 January 2000 which prescribes the census (cf. Decree - Annex 1). In terms of agricultural statistics, it is an economic and production unit which simultaneously meets three preconditions: it produces agricultural products; it is of a certain size, or exceeds it, in terms of area, the number of livestock, production, etc.; and finally, it is subject to independent everyday management.

#### **5.2. Questionnaire compilation process**

##### **5.2.1. Consultation**

An extensive process of joint action on the questionnaire was embarked upon in July 1998. It involves the central statistics department, the other Directorates of the Ministry, the members of the Agricultural Training Unit of the National Statistical Information Council (Cnis), the other Ministries (mainly the National Statistics Institute and the Ministry for Town and Country Planning and the Environment), the members of the Committee for Agricultural Accounts and outside partners (other than members of the Cnis), namely technical institutes and sectoral bodies. Locally, each regional and local service consulted the other services of its Directorate and its usual outside partners (Chamber of Agriculture, etc.).

Consultation on the national questionnaire was organised around two documents: a pre-model of the questionnaire and a "consultation table".

The pre-model is a montage of the questionnaires of the 1988 census and of the 1995 structure survey. It incorporates the list of results to be achieved within Community constraints and there are no fundamental changes vis-à-vis the 1988 version. It is the result of a compromise between recent developments in the structure survey and the length of the questionnaire, which is set at 12 pages maximum.

The “consultation table” compares the 1988 and 2000 questions so that everyone systematically expresses an opinion on keeping these questions on.

A special meeting of the Agricultural Training Unit of the National Statistical Information Council (Cnis) brought together all the persons consulted on an external basis who wished to be. A consultation report was presented and this meeting made it possible to identify the main lines of the questionnaire. All the proposals which were sent to the central statistics department were examined but not all could be satisfactory. Some of them were not covered by the framework laid down for the census. These were either questions on products (whereas the census is a survey on the structure of agricultural holdings) or subjects relating to the current economic situation (whereas the information in the census must serve as a basis for several years). Finally, certain requests meant the questionnaire would be too lengthy, bearing in mind that it was set at a maximum of 12 pages.

A Technical Group, made up of agricultural statisticians, then met to finalise the draft questionnaire on the basis of the results of the consultation and on the policy guidelines issued at the meeting of the National Statistical Information Council.

### **5.2.2. Tests**

Tests on the draft questionnaire took place in the field, in all departments, from 15 February to 30 March 1999.

On the basis of the tests, the contents of the definitive national questionnaire could be drawn up, its presentation improved and assistance provided in drafting the instructions and other training documents for interviewers.

The questionnaires completed during these tests were retained so as to serve subsequently as a test basis for the computerised processing chain.

The holdings selected for the tests must allow the most complete possible scanning for the different problems to which completion of the questionnaire might give rise. Holdings which are representative, through their size or production enterprise, of different types of farming in the department therefore need to be considered. It is important that units not used to our enquiries - apart from samples of structure, livestock and plant surveys - should be considered.

The choice of interviewers must be made without biasing the results. The permanent network interviewers are too few in number to deal with collection in autumn 2000, so a fair number of interviewers will be new. It is important that account should be taken of this directly the tests are carried out and that systematic recourse to experienced interviewers should therefore be avoided.



A total of 3 000 questionnaires were produced and 80% of holdings did not belong to the usual samples. Information on the questionnaires was for the most part provided by network interviewers (70% of questionnaires). 14% of questionnaires were entrusted to new interviewers recruited specially for the tests.

In the light of the tests, a new version of the questionnaire was drawn up. It was presented to the Agricultural Training Unit of the National Statistical Information Council in order to take account of the tests and present the latest arbitrations. The near-definitive questionnaire was then submitted to the Stamp Committee on 18 June 1999. Once the endorsement number was obtained, the questionnaire became definitive (11.8.1999).

### **5.3. Characteristics of the questionnaire**

The agricultural census questionnaire makes it possible to determine the agricultural population (the farmer, his family, paid family and non-family labour) and the means of production (breakdown of areas, plant and livestock products, buildings and equipment, etc.). To a lesser extent, the census also makes it possible to bring together associated activities, namely the processing of products on the farm, reception and tourism in a rural environment, contract services, etc. The questionnaire does not contain any questions on the values of financial results or income since these subjects are reserved for the Agricultural Accounts and the Agricultural Accounting Information Network (Rica) operations.

The questionnaire is closely linked to European obligations, although national questions have been added on the breakdown of the UAA by municipality, spreadings of effluents on the holding, livestock premiums and dues and on signs of quality.

The AC 2000 questionnaire breaks down into 22 versions. Of these, 19 versions relate to metropolitan France (one version per regional agricultural statistics department). Three versions are reserved for the four overseas areas: Guadeloupe and Martinique, Guyana and Reunion. Each of these versions is made up of an identical common core, for metropolitan France on the one hand (cf. versions of the questionnaire - Annex 5) and for the overseas departments on the other, and also some questions more specific to the region.

In terms of length the questionnaire was limited to a maximum of 12 paper pages, reflecting the average duration of the interviews and the training abilities of the interviewers.

Two specific operations were conducted jointly with the census. To meet the request from the Community, a viticulture questionnaire (cf. versions of the questionnaire - Annex 5) was produced each time the products of wine grape vineyards and table grapes were marketed.

The second operation is a very short questionnaire on perfume, aromatic and medicinal plants. This was introduced at the request of the National Joint Trades Board for Perfume, Aromatic and Medicinal Plants (Onippam). Drawn up in partnership with the Board, the questionnaire did not affect the progress of the census.

## 5.4. Divergences from variables of the European Union of 15

Certain characteristics diverge from the variables of the European Union of 15. Some correspond to aspects for which France has requested, and obtained, an exception. In the case of other points, which are limited in number, the response to the Community constraint takes the form of reprocessing the information collected.

France has been allowed three exceptions. In the case of grouped holdings, only one of the co-farmers is considered as the farm manager. This is the person who carries out most of the daily management functions on the holding, otherwise it is the youngest co-farmer.

Christmas trees are not regarded as an agricultural product and are categorised with the holding's woodlands and forests.

Breeding cocks are not shown with layer hen numbers but with broilers.

As regards the other points, France's treatment does show divergences, ranging from that of vocabulary to the problem of content.

In France, the farmer is called the economic and financial manager. This farmer or economic and financial manager is not the reference person, who is the farm manager, defined as the person who conducts daily management. Thus we are interested in the family of the farm manager and not that of the farmer. This divergence does not pose any problem in the case of individual holdings, which represent 80% of all holdings. In the case of the remaining 20%, complex treatments are necessary to re-transcribe these data in accordance with Community rules when the file is relayed to Eurostat.

The same applies where the holding is farmed on behalf of another natural person: we do not have information on the spouse of this other natural person. In this case, 440 holdings are in the 2000 census. We therefore make estimates in the light of the 1988 census results (average age for each occupation, for example) and deductions or hypotheses: if the manager is related, his spouse is also.

The recording of the holding's labour, whether family or not, is identical whatever the status of the holding. As far as Eurostat is concerned, in the case of enterprises with members (EARL<sup>1</sup>, SCEA<sup>2</sup>, SA<sup>3</sup>, SARL<sup>4</sup> or other legal person, or statuses 3, 5, 6 and 7), the co-farmers and their families appear as non-family labour.

The "mushrooms" variable is understood in terms of production and not in terms of area. A correspondence key has therefore been used to meet the Community constraint.

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*1 Agricultural holdings with limited liability – Translator.*

*2 Non-trading farming companies – Translator.*

*3 Public limited liability companies – Translator.*

*4 Private limited liability companies – Translator.*

## 5.5. Instructions

Just like the questionnaire, the instruction booklet was put together in several stages. A provisional instruction booklet was made available to interviewers at the time of the tests. Bearing in mind the very short deadlines (10 days or so) between finalising the test questionnaire and launching the tests in the field, emphasis was placed on the content of the document. Its form was improved at the time the definitive version was put together.

The existence of this provisional booklet made it possible for interviewers to avoid cross-reading the 1988 census instructions, structure survey instructions (1995 and 1997) and an endorsement comprising the numerous modifications for 2000 (new questions, specifications of instructions, amendments and changes to codes in particular).

In the light of the tests, new instructions were drawn up. A re-reading group was set up to improve legibility before sending the document of some 200 pages to a printer for typesetting.

The instruction booklet is intended to be as complete as possible but does not claim to cover all the very specific situations with which the interviewer might be faced (cf. Instruction booklet to new interviewers - Annex 6). Interviewers then find the necessary assistance and advice among local agricultural statisticians.

## 5.6. Aide-mémoire questionnaire

To supplement the instruction booklet, an aide-mémoire questionnaire was made available to the interviewers. This document is a digest of the main aspects of the instructions. What is involved is the very least that needs to be known to provide information on a questionnaire. The aide-mémoire questionnaire supplements the instruction booklet by making rapid access to information possible.

The document is in the form of facsimiles of each page of the questionnaire. For each page the main instructions to be known are set out opposite each heading in condensed form.

Considerably less voluminous than the instruction booklet, being only 28 pages long, this document is greatly appreciated by interviewers at the time of interviews since it is easier and quicker to handle. The majority of the questions which the interviewer asks himself are answered in it. In the case of more specific problems, the interviewer then consults his instruction booklet.

## 5.7. Non-responses

Out of the 664 000 holdings recorded in the census, some 2 000 refusals were “removed” during collection. Generally, when an interviewer meets with a refusal, his monitor intervenes in the survey. Usually, the interviewer then goes back to the interviewee to provide information on the questionnaire or else the monitor conducts the interview.

If the monitor’s intervention is not sufficient, someone from the local statistics department again gets involved in the survey. In general, telephone

discussions are enough to change the farmer's mind about his refusal and the questionnaire is completed normally.

However, there are cases where the farmer remains adamant about his refusal. Thus only 270 refusals, or 0.04% of questionnaires, could not be resolved at the time of the survey. In this case, the statisticians of the local statistics department collect scattered data to complete the questionnaire: bribes for information given by the recalcitrant individual, consultation of administrative files, neighbourhood surveys, etc. Ultimately, the file does not include any holding without a questionnaire.

In the light of the information available nationally, it is not possible to typify persons who have refused to respond. This information is available at local level only.

## **6. RECRUITMENT AND TRAINING**

### **6.1. Recruitment**

The census is a large-scale operation requiring the recruitment of thousands of interviewers for the completion of the questionnaires, monitors to supervise them, checkers responsible for capture, etc.

The quality of the agricultural census and adherence to the timetable depend in large measure on good recruitment, in terms of both quantity and quality, of interviewers, monitors and capture checkers. Collection in the field began on 1 October, while in September the interviewers and monitors were selected. In the case of checkers, the deadline was put back one month.

The recruitment operation is long and must be conducted with care. A system for monitoring the recruitment of all the census takers recruited for collection and capture was set up in the second quarter of 2000. What was involved, both at regional and central level, was ensuring that no local statistics department fell behind in recruitment operations and helping the local statistician to set up the recruitment systems where appropriate.

In order to guide the teams in recruitment, two guides were produced, one an educational and practical one and the other an administrative and legal one. Recruitment is not the job of the local statistician. The production of the educational guide was placed with an outside consultant in order to train the statisticians to get the interviews through the system, read a curriculum vitae and analyse the results of an interview. The educational guide comprises post and skill profiles for each type of personnel to recruit, an interview record card, a series of tests, potential sources of recruitment, various models (advertising, invitation letter, administrative information record, etc.).

The administrative and legal dossier takes stock of the regulations in force on the subject of recruitment, work contracts, remuneration, compensation, etc. and brings together the main texts on the subject.

## 6.2. Training

In 2000, less than one local statistician out of two had already been involved with a census. In the case of those who played a part in the 1988 census, the circumstances were different – now new computer tools in particular have become available. Training represents an important issue and investment for all. Permanent staff must be trained but so must interviewers, monitors, checkers and persons recruited to strengthen the teams. The census operation was split into several parts so that training by subject could be undertaken.

Depending on the subjects, several training schemes were introduced. Either the end users were trained directly, or training was done on a serial basis. In this case, the national level trains persons who become trainers and these, in turn, train other persons.

Training courses are organised on recruitment, on the three computer tools developed specially for the census (compilation of the “basic list” file, a tool for the management and circulation of information, checks on aggregate data), on collection and on dissemination.

Between December and March 2000, four 3-day training sessions took place in Paris on the recruitment and management of interviewers. These training sessions, which were entrusted to an external consultant, were intended to teach how to prepare and conduct a recruitment interview and to lead a team of 50-100 persons. The training method was based on the alternation of theoretical contributions, exercises in small groups and training situations using a video. An educational dossier (cf. foregoing paragraph) was sent to each participant.

For the stage involving the compilation of the “basic list” file, the training sessions took place in two stages: training at work in the office using the tool developed specially and training for local committees in the town hall. In September 1999, two central trainers jointly trained the regional statistics departments at work in the office. Four sessions were thus organised at two different sites (Toulouse and Paris). The regional departments then trained the permanent staff from their local departments. In January 2000, the same scheme was adopted again for the collection part in the town hall. An additional stage was, however, added in the course of which the local statistics departments trained their interviewers.

All the necessary aids for these training sessions - training plan, training materials, practical exercises, etc - were produced by the central teams.

Two other computer tools were developed for the census. The first allows the movement of information collected locally via the regions to the central site. The tool also enables the monitoring of collection to be managed locally and in the region. The second tool allows checks on the survey data to be carried out by aggregating the questionnaires. For these two tools, training in groups was introduced. It was wholly placed with an external provider, who produced the aids and provided the training sessions. Two persons per local statistics department and two per region were trained together. Thirty 3-day sessions with eight persons per session were held in July/August 2000.

For collection, the national level trained two persons in all per local statistics department and two persons per region over two days in June 2000. Three teams of two national trainers each were set up. They brought in one person from the central statistics department for the content and a teacher for the educational aspects - the use of tools and organisations of final training sessions. Ten groups were set up by region groups. Once the persons from the regional and local statistics departments had been trained, they trained interviewers and monitors in September/October 2000. The training courses were held over three days: two days of theoretical training followed by one day of consolidation after the completion of a number of questionnaires in the field.

Different aids were prepared and used for these sessions. A series of 60 slides filled out the most important points of the questionnaire. Two videocassettes were produced, one on the definition of an agricultural holding and the other on the presentation of the interviewer's job through accounts by former interviewers. Exercises with answers were offered.

As for the checkers, they were trained directly by the local statisticians at the time the first questionnaires were keyed in.

Finally, the regional and local statisticians also attended courses in editorial techniques and formatting in order to make the most of the information collected in the context of the census.

## **7. DATA CHECKING**

### **7.1. Field checks**

Data checking begins at the collection stage on the farmer's premises. It then continues throughout the processing chain. Field checks are performed at two levels: interviewer and monitor.

The function of the interviewer is to verify the totals and consistency direct at the interviewee's in order to avoid having to come back. After the discussions, he must check the additions and reports and ensure the questionnaires are complete, consistent and legible. Where the questionnaires are checked, the interviewer sends them to his monitor, who undertakes the same checks.

### **7.2. Capture/control**

Once field checking has been completed, the monitor passes the questionnaires to the local statistics department. A new manual control is carried out, especially at the beginning of collection in order to check there are no major errors. The questionnaires are then keyed in using capture/control software. This is a computer application which allows the questionnaires to be keyed in while activating a set of checks as capture proceeds.

The checks are of three types: minor, major or blocking. A minor check is a warning which does not require any correction. An example is an area which is small having regard to the numbers of bovine animals. A major check does

call for compulsory correction but this can be postponed. The questionnaire can then continue to be keyed in but the dossier contains a specific indicator which excludes it from further processing operations. An example is an erroneous total. Finally, a blocking test requires immediate correction. One instance of this in particular is when a capture code does not belong to the list of accepted codes.

At the time of writing the capture/control programme, a proper equilibrium needs to be found between the efficiency of the checks and their untimely release which would increase capture times. This is a task which is all the more tricky since no indicator allows, for each minor check, the number of corrections made to the number of times when the keyboard operator has carried on regardless. The best possible proportioning is sought at the test stage of this software.

A total of 1 014 checks were entered on the national part of the questionnaire (including the viticulture part). Of them, 459 were minor, 305 were major and 250 were blocking. The viticulture part comprises 72 specific checks (19 minor, 40 major and 13 blocking).

### **7.3. Checks on aggregate data**

#### **7.3.1. Presentation**

Checks on aggregate data are a means of improving the quality of results. They supplement the system set up for the collection of census data, namely training, field checking and capture/control in particular.

These checks are probability checks on the variables of a set of questionnaires. They do not indicate a definite error but they do make it possible either to presume anomalies or to confirm the results obtained. They result in aberrant values (line error, for example), the systematic application of rules by an interviewer, errors not detected in the capture/control programme and its non-compliance with instructions, being spotted.

The operation requires reviewing a lot of information in order to select abnormal data and then applying certain corrections. The fairest balance between the processing operations demanded and the actual corrections always needs to be sought. The checks on aggregate data took place in the regional and local statistics departments as the questionnaires were keyed in.

#### **7.3.2. List of functions**

The tool for checking aggregate data brings two control modules into operation: a standard module and an optional module for more in-depth processing and in order to process local specific features. A general menu allows access to each function.

The standard model comprises three functions: a multi-source table, a ratio state and a function for the location of questionnaires. The multi-source table makes it possible to compare certain aggregate data with sources other than the 2000 census (1988 census, annual agricultural statistics of 1999, administrative files which can be mobilised nationally). The ratio state offers a list of 20 or so ratios between variables in the questionnaire. Associated with

the multi-source state, the ratio state is intended to be the means of revealing anomalies; the search then needs to be refined in order to work out the problem before going down to the questionnaire(s) deemed to be at fault. Thus the location function of the questionnaires allows a variable to be extracted from a set of questionnaires.

The optional module allows a questionnaire to be consulted, the maximum and accumulated value for each quantitative variable to be displayed, individual data to be extracted in order to recover a file to be worked on using office automation software and a capture report to be obtained in order to detect untimely forcings of minor checks.

For each function, a geographical (NUTS 2, NUTS 3) and human (interviewer) criterion may be specified. Aggregations are possible with each criterion.

Checks on aggregate data are performed in a relational database (Sybase in this instance). Using the database manager did not require any specific skills to be mobilised in local and regional departments.

All the corrections are made exclusively at local posts. The application did not entail any indicator intended to gauge the impact of the corrections made as part of this operation.

## **8. DISSEMINATION**

The results of the agricultural census were first disseminated as from February 2001. They comprised annotated products and products providing gross figures. The operation was organised either centrally or it was left to local initiative.

On the basis of the definitive results, the central statistics department took over the production of national annotated products and of standard products of gross figures for all the geographical levels. At the same time, the figures were stored in our databases. This work is to be completed in early 2002.

### **8.1. Standard products of gross figures**

Standard products of gross figures are intended to meet the commonest requests. Preparing them is the responsibility of the central statistics department with the help of an external company. These products are produced from definitive figures, with the exception of data loaded onto the internet from provisional data.

Three types of standard products have been drawn up: the Comparative Record Sheet, the Core and the Inventory.

These products are available in the form of CD-ROMS, publications, A4 sheets and storage in the Datagreste database and on the Ministry of Agriculture's website (<http://www.agreste.agriculture.gouv.fr>).

The "Comparative Record Sheet" is intended firstly to meet the demand for data at the most detailed geographical level possible. It comprises 50 or so variables with a comparison covering the three last censuses. Half the



variables were left to the choice of the regional and local statistics departments.

“The Core” presents the main data of the census in a legible and attractive form while supplying more detailed information than the Comparative Record Sheet. It contains 25 tables, 15 of them taking up 1988 data.

As for the “Inventory”, this corresponds to the exhaustive analysis of the questionnaire.

## **8.2. Annotated products**

As a supplement to the standard products of gross figures, two types of annotated products are produced: a “4-page” and a “20-page” publication. With a view to harmonisation and assistance to the regional and local services, standard models are offered by the central level for these two aids. They have made a very rapid dissemination of results possible.

The “4-page” product was drawn up on the basis of provisional data directly collection and checking were completed. In it, the outstanding and dynamic facts of the geographical level being worked on were developed, namely employment, farming as an occupation, concentration, status, training and age of managers and co-farmers, etc.

The “20-page” publication is produced on the basis of definitive figures and is only compulsory for the regions. Eight subjects appear in the publication: population and labour force, holdings, livestock, agricultural areas, material and equipment, the status and the type of tenure, diversification and the environment.