FARM STRUCTURE SURVEY 1999/2000
NATIONAL METHODOLOGICAL REPORT

Member State: ITALY
TABLE OF CONTENTS

SUMMARY .................................................................................................................. 3

1. INTRODUCTION ................................................................................................... 6
   1.1. History, scope ............................................................................................... 6
   1.2. Legislation ..................................................................................................... 7
   1.3. FSS-organisation .......................................................................................... 13
   1.4. Work process ............................................................................................... 24
   1.5. Publicity campaign ...................................................................................... 25
   1.6. Main changes in the 1990’s ......................................................................... 27

2. CHARACTERISTICS ............................................................................................... 27
   2.1. Characteritics ............................................................................................... 27
   2.2. Questionnaire .............................................................................................. 29

3. SURVEY METHODOLOGY .................................................................................... 31
   3.1. Preparing the survey operations ................................................................. 31
   3.2. Data collection and data entry ..................................................................... 34

4. PUBLICATION AND DISSEMINATION .............................................................. 37

5. SUGGESTIONS FOR FURTHER TASKS ............................................................ 39

6. METHODOLOGICAL NOTES ............................................................................. 39
SUMMARY

Legal bases
The obligation to carry out the agricultural census every 10 years arises from Article 2 of EEC Regulation No. 571 of 28 February 1988, amended by EC Regulation No. 2467 of 17 December 1996. At the national level, the general provisions on censuses fall within Article 37 of the law of 17 May 1999 No. 144 and of the corresponding implementing regulation (DPR No. 197 of 6 June 2000).

Operational structure
The network for the collection of data in the country is structured on four levels, namely:
- national level: ISTAT and National Union of Chambers of Commerce;
- regional level: Regional Census Offices, Regional Technical Commissions, Regional ISTAT Offices;
- departmental level: Departmental Census Offices of the Chambers of Commerce and Departmental Technical Groups;
- communal level: Communal Census Offices.

Enumerators' technical training
Having regard to the large number of the enumerators, their dispersal over the national territory and the need to respond to multiple needs, differentiated actions were carried out, namely: direct and/or computer-aided lessons (CD-ROM, Internet pages, etc).

Field of observation and survey units
The census concerned all the agricultural and forestry holdings, independently of their size or of their legal status. The survey unit is represented by the holding, i.e. the economic entity, made up by plots (contiguous or not) and/or by equipment, where an agricultural or forestry activity is carried out by a holder. This can be a natural person (with or without employees), or a company, or a co-operative.

Criteria for identifying the holdings
Holdings were identified commune by commune by means of the land register. Where the land register was not up to date, the holding was assigned to the Commune where the greatest part of the acreage was located.

Questionnaire
The questionnaire was drafted taking several requirements into account, namely:
- the users' information requirements;
- the obligation to conform with international organisations (FAO and EU);
- comparability in relation to previous data;
- attention to specific national and/or local needs;
• the need to contain within reasonable limits the mass of information to be provided.

**Reference period**

The following variables refer to the marketing year: 1 November 1999 – 31 October 2000: production sold; accounts; land use; manpower; mechanical equipment; work in progress; computer equipment; external relations.

The following variables refer to 22 October 2000: type of management; legal form; agricultural credit; membership of economic associations; parks and other protected grounds; shelters; total area; utilised agricultural area; livestock; buildings and dwelling houses.

**Update of the lists of farms by commune**

Sources used:

• file resulting from the 1990 census;
• files of the National Agricultural Computer System, updated in 1997 and 1998;
• administrative files from the Ministry of Finance;
• register of farms from the Chambers of Commerce;
• files managed by the AGEA.

**Preliminary pilot surveys**

In order to identify and resolve all the technical problems involved in the location of the holdings and on the update of the lists by commune, three pilot surveys were carried out. These surveys targeted the following objectives:

• identification of the geographical details of the cultivated land;
• update of the ISTAT register of farms;
• quality control of the lists of holdings and of the questionnaire.

**Preliminary operations concerning the data collection network**

Before the gathering of the data, ISTAT provided each commune with all the equipment necessary for the carrying out of operations

**Gathering of the data**

The necessary equipment was delivered to the Communal Census Offices at the beginning of October 2000. On 23 October, enumerators undertook their operations according to a pre-established programme. Revision of the questionnaires was carried out, day by day, by the Communal Offices. These dealt with all the operations of revision and aggregation of the data at the two following levels:

• cadastral unit level ("foglio di mappa");
• communal level.

The latter operation was carried out on the basis of an ISTAT form.

Monitoring, organised at departmental and regional level under the supervision of ISTAT, made it possible to follow in real time the correct collection and checking of the data.
**Data acquisition**

The acquisition of data in machine-readable form was carried out in six centres around the country. All these operations were carried out according to the computer procedures established by ISTAT as regards the processing and protection of data. The complete homogeneity of such a process was thus ensured.

**Data processing**

The validation of the data proceeded at two levels:
- departmental level: technical and administrative inspection;
- central level: plausibility controls, corrections, imputation of missing data, etc.

**Dissemination of the results**

The plan for the publication of the results according to the various parameters (territorial levels, variables, etc.) was established by ISTAT.

**Guarantees of quality and coverage**

After the census, ISTAT carried out two sample surveys in order to check the reliability of the results and the degree of coverage.
1. INTRODUCTION

1.1. History, scope

Economic censuses are in first place aimed at providing a comprehensive picture of the size and characteristics of the national economic system with a high territorial detail, and at creating records of production units (farms, undertakings, institutions) to be used between censuses as a basis for the performance, of sample surveys for research and economic/social study purposes.

In particular, if the census of agriculture has always been characterized by its ability to provide, at highly disaggregated territorial levels, a huge quantity of information about the primary sector's production units, the October 2000 census, the fifth carried out in Italy, takes place while the agricultural sector is experiencing a very important "strategical shifting". In fact, the EEC agricultural policy reform, together with the launch of the so-called "Agenda 2000" that foresees the accession to the European Union of many Central Europe countries, will involve (and the first effects are already to be seen) a substantial re-thinking of development strategies in the agricultural field, more and more oriented to play a multi-purpose role of economic, social and environmental nature. We are growing accustomed to talking about "rural" development rather than of "agricultural" development, meaning exactly the complexity of a sector whose actual importance cannot be measured only in terms of percentage of its added value on the gross domestic product.

The contents of the census have been broadly debated about at international (especially European) level, confirming the need to protect a certain historical continuity from the census of the early Nineties. The innovation at national level has been promoted by Istat from 1996 onwards, first with a commission in charge of submitting proposals for the restructuring of agricultural statistics and later with the ad-hoc Study Commission instituted for the 2000 agricultural census.

From a methodology point of view, the 2000 census used a "classic" survey technique based on the use of interviewers and "face-to-face" interviews, and nevertheless features many and important innovations as compared to the past. These had ensure high data quality standards and a quicker dissemination of results, and therefore provide a reliable knowledge base for the definition of national and local policies as well as for the identification of individual farm strategies. The census also fits perfectly in the strategies for the implementation of the Agricultural Statistics System, including the various statistical sources produced by Istat and by other parties in the National Statistical System (Sistan).

From an organizational point of view, the census network has been characterized by the utmost integration and valorization of the specific expertise of the bodies performing statistical activities across the national territory.

Furthermore, the relationships between census Departments and interviewees are structured in such a way as to create a relationship of trust
and transparence, in order to obtain the maximum cooperation by the interviewers. The data were disclosed respecting privacy protection, by means of modern online tools, for an easier access by users. Lastly, it should be pointed out that the results of the agricultural census were disclosed across the territory according to a pattern consistent with the one that were adopted for the general censuses of 2001 (population, housing, industry and services) so that users (in particular local authorities) were offered a fully integrated statistical base in its main demographic, social and economic aspects.

The general census plan represents the general outline of census operations. It briefly describes the legal grounds of the census, the organization of the census network, certain methodological aspects, the duties of the bodies involved and the preliminary milestone plan of operations. The Plan were used by network components as a reference to start planning their activities, as well as any useful action to organize the resources required to perform the census. The details of individual operations were explained during the next months in specific circular letters.

A draft operational regulation for the Agricultural Census pursuant to Article 37 of Law no. 144/99 is attached to the Plan. The draft was approved by the Council of Ministers and submitted to the General Accounting Office for prior legitimacy verification.

1.2. Legislation

The obligation to perform a census of agriculture once in a decade is set forth by Article 2 of the EEC Regulation no. 571 of February 28, 1988, amended by EC Regulation no. 2467 of December 17, 1996. This regulation governs the production (every two years) of statistic information about the structure of farms, crops grown, number of livestock heads, mechanical means, labor, etc. in order to evaluate the situation of an essential field for the development of the European Union and to follow the evolution in time of the farms with a given cultivated area or whose production is to a given extent intended for sale.

While regular surveys (on a yearly basis in Italy) of these phenomena are carried out on a sample of firms, the census, besides surveying structural information for all farms, was also aimed at updating the records of these farms. Therefore, the fifth agricultural census surveyed, for each municipality, the number of agricultural, forestal and zootechnical farms, of any size and however managed, as well as the basic structural characteristics of each of them. It also provided useful data for the creation and annual update of the Statistic Record of Farms and Agricultural Businesses (ASAIA) pursuant to the EC Regulation no. 2186/93.

Other provisions concerning agricultural statistics are contained in various European Union regulations and directives, in the recommendations of the United Nations Food and Agriculture Organization (FAO) and in national law provisions, and are all aimed at obtaining standardized statistical information, comparable at European and global level.
At national level, the general provisions on censuses are contained in Article 37 of Law no, 144 of May 17, 1999, enforcing the obligations set forth in the mentioned EC Regulations.

Article 37 rules in general all the activities linked to the 2000/2001 censuses and states that their specific performance should be subject to the provisions of one or more performance regulations, to be issued under Art. 17, 1st paragraph, of Law no. 400/88. In particular, these regulations defined the survey range, identified the parties whose answers are mandatory, indicated how census operations had to be performed and the criteria for the allocation of survey phases among public and private entities and bodies, and also how census information had to be released and disseminated. The regulations also defined the contributions due to Sistain bodies in consideration of the survey operations performed, established the criteria for the assignment of survey and coordination functions to the bodies in charge of performing survey activities, for the definition of their fee and of the compensation modalities for municipal interviewers and coordinators, according to company structure and to the territorial distribution and number of surveyed units. Lastly, the regulations dictated how Istat and the Chambers of Commerce, Industry, Crafts and Agriculture (CCIAA) had to hire staff by means of term employment contracts.

The census activities performed by the Regions and Autonomous Provinces of Trento and Bolzano were subject to separate rules, established in principle by the Protocol of Understanding signed between Istat and the Conference of State and Regions on August 5, 1999.

Survey activities were performed in compliance with the law governing the treatment of personal information (Law no. 675/96), as subsequently amended and integrated, as well as with the rules established by the Deontology Code for the bodies belonging to the National Statistic System under Legislative Decree no. 281/99, pending of approval.

Technical operations were ruled by this General Census Plan (integrated by the Regional Plans approved according to the procedure envisaged by the above-mentioned Protocol of Understanding between Istat and Regions), and by specific Istat circulars.

This census of agriculture fell within the statistics of national interest, and was included in the National Statistical Plan approved by Prime Minister's Decree of March 31, 2000 and included in the surveys for which answers are mandatory.

Census Departments, Municipal Departments in particular, were entrusted with the delicate task of identifying the surveyed units and to avoid that any of them are left out of the survey, as well as of cooperating with the interviewees to ensure the exhaustiveness and accuracy of the answers provided. Interviewees, in turn, must cooperate with the UCC, as they were bound under a specific statutory obligation to "provide all the information required
with the questionnaires\textsuperscript{1} As this is a statutory obligation, if the interviewees do not provide the information required or knowingly provide wrong or incomplete information, they may incur the payment of the fine established by article 11 of Legislative Decree no. 322/89, expressly quoted in art. 15, 3rd paragraph, of the regulations enforcing Law no. 144/99\textsuperscript{2}.

The interviewees’ awareness about the Census is particularly important for the purpose of establishing a cooperative relationship between interviewees and interviewers, for the sake of the positive outcome of census operations and of the quality of the data collected. These were made available by Istat at request, in compliance with applicable statutory provisions concerning the access to statistical data, statistical data secrecy and privacy protection.

Therefore, the relationships between Census Departments and interviewees must be based on the utmost fairness and transparence, so as to create a trustful and proactive environment during the survey. Specific recommendations on the best behavior patterns are provided in the interviewer's manual and in pre-Census briefings.

On the other hand, while on their job interviewers and coordinators are in the position of civil servants and therefore subject to applicable laws on statistical data secrecy and privacy protection under art. 8 of Legislative Decree no. 322/89 and of Law 675/96, as subsequently amended.

In particular, Legislative Decree no. 281/99, which amended and integrated Law no. 675/96, introduced a general rule on the confidential treatment of personal information for historical, statistical and scientific research purposes, and established that the public and private bodies in charge of processing such information should undersign specific deontologic and behavioral codes, published in the Official Gazette, according to the provisions issued by the Surveillance Authority for the protection of personal information of February 10, 2000. Actually, the need to ensure confidentiality had already been taken into account by Legislative Decree no. 322/89, the law reforming public statistics. In fact, this law ensured the protection of personal information by instituting the secrecy of statistical data, regulating the access to statistical data and the dissemination of statistical information within the National Statistical System.

Legislative Decree no. 322/89 stated that the data collected during statistical surveys may not be disclosed to any third party, either public or private, nor to any Public Administration department, unless in aggregated form and in such a way as to prevent the interested persons from being identified. In any case the data cannot be used for a new identification of the persons involved.

\textsuperscript{1} As to citizen awareness about their obligation to provide information, article 15 of the Regulations under way of adoption establishes that "advising the public about the obligations and modalities related to information gathering is responsibility of each Town Authority, by means of an adequate official poster provided by Istat”.  

\textsuperscript{2} This monetary sanction used to have a criminal feature. In fact, it was a fine, that could even be increased in case of relapse (art. 18 of Royal Legislative Decree no. 1285/1929). The procedure was the following: the formal charge was preceded by a notice whereby the person involved was invited to fill out the form within a short term, after which the formal charge was served to him/her in 90 days from the deadline established by the notice.
The data collected may be used by the statistics department only for statistical processing purposes; if they are collected for other purposes, they may be subject to further statistical processing only to the extent to which the national law, the EC laws or a Regulation allows to do so. Furthermore, Legislative Decree no. 281/99 establishes that the data collected for statistical purposes may be processed for other statistical purposes of public interest if these are clearly defined and of limited duration, and revealed to the person interested pursuant to law.

The data subject to statistical secrecy do not include the names and last names of people and identification names of assets, or certifications released from public registers, list of deeds or documents of public domain; for the statistics department personnel, these data and documents will remain under normal business secret and may be accessed at the competent administrations as set forth by Law no. 241/90 and its relevant enforcement provisions.

These practices for the protection of the personal information obtained from surveys were integrated by the provisions set forth by Law no. 675/96, as later amended and integrated. These provisions govern the relationships between the survey holder, the interviewers and the individual interviewees the information are referred to. In particular, the laws in force are aimed at governing the relationship between the parties processing the information (i.e. the so-called holder, the interviewer or their supervisors) and the parties interested, i.e. the persons whom the information refers to. The latter must be informed about the purposes of the interview, whether the answers are mandatory or optional, how the information were treated, the consequences of their refusal to answer as applicable, the field(s) in which such information were disseminated and disclosed, the rights of the interviewee, of the survey holder and of the interviewer. For such purpose the questionnaire contains an information notice specifying the purposes of the interview and the rights that the interviewees have vis-a-vis the survey holder and the interviewer.

In the case of the agricultural census, article 16 of the Regulations pending of approval establishes that any operation involving the treatment of personal information must abide by Law no. 675/96 as subsequently amended and integrated, and by the already mentioned rules on statistical secrecy. Given the complexity of the survey, while the survey "holder" is Istat, survey "managers" are many. In particular, the responsibility at central level is vested with the competent departments of Istat, while at regional, provincial and municipal level, according to the specific tasks related to the performance of the various survey phases, the responsibility is vested with the various Census Departments under article 16 of the Regulations. Survey managers have been appointed by Istat in circulars no. 38 of October 15, 1999 ref. 10465 and of October 21, 1999, ref. 10665.

Under the point of view of the right of access, it is worth mentioning that census data are also subject to the ordinary rules on the right of access to official statistics under art. 10 of Legislative Decree no. 322/89, and to those already described on statistic secret, with certain specific remarks concerning the supply of information to National Statistical System departments. As in the past (1990, 1991 and 1996 censuses) and in line with the principles
established by Legislative Decree no. 322/89, the supply of information was governed by the performance regulations in order to obtain a better and more appropriate use of census data by National Statistical System departments. Under a procedural profile, Istat, once the required data verification operations are completed, supplies such data to the statistics departments requiring them, deprived of any identification detail, per each surveyed unit, so that the interested administrations may use census results for statistical processing practices of institutional interest\(^3\). For regional planning requirements, pursuant to article 17 of the performance regulations, Istat may provide applicant Regions and Autonomous Provinces with provisional data.

Individual census data, deprived of any identification detail, may be used only for statistical processing in the interest of the administration, authority or body which the Statistics Department belongs to. For a rational utilization of information, Statistics Departments may also obtain data referred to neighboring portions of land, the knowledge of which is required for the performance of the institutional functions of the administration those Departments belong to.

Once all the data have been received, the Statistics Department were responsible for their preservation and must take all the adequate measures to avoid any alteration of cancellation of such data, pursuant to statutory provisions and the rules dictated by the deontology code being approved. Moreover, that same Department, in order to protect the confidential nature of the information obtained from the census, may not disclose the basic information to any other public or private department, including those of the administration it belongs to. In particular, the Statistics Departments of the National Statistical System were come responsible for the census data as soon as they acquire them, on an individual basis and without any identification detail, also towards the administrations these Departments belong to. The administrations may require specific statistical processes, but are not entitled to know the original information, let alone use them for administrative purpose, in obeisance to the rules on statistic data secrecy.

As already mentioned, Legislative Decree no. 281/99 foresees the adoption of a deontology code for the processing of personal information for statistical purposes. Such code must be inspired to the principles set forth by that same Decree, complementing the rights and fundamental freedom of individual persons (in particular their right to privacy) with the requirements of scientific research and statistics, as the expressions of the Constitution-granted principle of freedom of research, of the progress of research aimed at improving the living conditions of the community and of the right to have official statistic information as a collective asset\(^4\).

\(^3\) The data are provided on computer diskettes or other formats as may be agreed between applicant offices and Istat, with refund of any reproduction and mailing costs.

\(^4\) In particular, article 10 of Legislative Decree no. 281/99 sets forth that one or more deontology and behavior codes concerning the processing for statistical and scientific research purposes in the public or private field, considering the provisions of Legislative Decree no. 322/89 for the parties already included in the National Statistical System, should identify:
In particular, information processing operators and supervisors, and therefore interviewers as well, must abide by a fair and transparent behavior throughout all survey phases. Census Department managers must:

- ensure in general that all personal information processing operations are carried out according to business secret and statistic secret provisions and according to the principles set forth by applicable laws on privacy protection;

- pay special attention to the selection of interviewers and the definition of survey organization and practices, in order to ensure that survey targets are achieved in compliance with confidentiality provisions;

- select information processing operators and appoint them by written instrument, providing them with the necessary technical and organizational instructions to allow them to do the processing in compliance with confidentiality provisions;

- keep the information under custody and adopt any organizational and technological security measure as may be required to avoid that persons alien to information processing operations have access to the latter.

---

a) "the assumptions and procedures to document and verify that the processing, unless in the cases covered by Legislative Decree no. 322/89, are carried out for actual and appropriate statistic and scientific research purposes;"

b) for any aspect not covered by the law and by this decree, the additional processing assumptions and the relevant guarantees, also with reference to the duration of data keeping, the information to be rendered to the interested concerning information collected from third parties, the disclosure and dissemination, the selective criteria to be followed for the treatment of identification data, the specific security measures and the ways in which data may be modified in enforcement of the interested party's rights, taking into account the principles contained in the recommendations as per article 1;

c) the whole of means that may be reasonably used by the holder of processing and by others to identify the person interested, also on the basis of the knowledge gained from the technical process;

d) the guarantees to be respected while enforcing the provisions as per articles 12, 1st para., letter d) and 21, 4th para., letter a) of Law no. 675/96, establishing the opportunity to act even without the interested person's consent, taking into account the principles contained in the recommendations as per article 1;

e) simplified practices for obtaining the interested persons' consent as to the treatment of the information as per article 22, 1st para. of Law no. 675/96;

f) the fairness rules to be observed while collecting the data and the instructions to give to the interviewers;

g) the measures to take in enforcement of the principles of data pertinence and sufficiency, and the security measures provided for by article 15 of Law no. 675/96, also with reference to the precautions aimed at avoiding the access by individuals not authorized to the processing and the unauthorized identification of the interested persons, the cross-relation of information systems also within the National Statistical System and the exchange of data for statistical and scientific research purposes also with foreign authorities and departments on the basis of the guarantees envisaged by article 28, 4th para., letter g) of Law no. 675/96;

h) the commitment to respect behavioral rules by the persons in charge of the processing, who are not statutorily under professional or business secret, so that congruous levels of security and confidentiality are maintained".
Data processing operators was, in turn:

- bound to statistic secret under Art. 9 of Legislative Decree no. 322/99 as subsequently amended;
- bound to business secret under Art. 8 of the same Decree, as long as they are civil officers;
- under obligation to abide by the technical and organizational instructions given by their supervisor.

In more detail, those processing operators in charge of filling in and collecting the questionnaires for the Agricultural Census (i.e. the interviewers) must add to their tasks as described above a series of obligations towards the interviewees. Therefore, interviewers must:

- identify themselves to the interviewee by showing their papers;
- answer to all the interviewee's questions, also concerning the purpose of the survey and any statutorily mandatory answer;
- provide the necessary support to the filling out of the distributed questionnaires;
- check the exhaustiveness and accuracy of the information obtained;
- pay special attention and diligence in the collection of personal details;
- refrain from making further unauthorized inquiries to the interviewees;
- use only the forms supplied by Istat;
- correct any mistake or wrong information obtained during the interview in a timely manner.

1.3. FSS-organisation

The survey network for the agricultural census has been structured on four levels and involves various entities: Istat and the National Union of Chambers of Commerce at central level; the Regional Census Departments, the Regional Technical Commission of Regions and Autonomous Provinces and Istat's Regional Departments at regional level; the Provincial Census Departments of the Chambers of Commerce and Provincial Technical Boards at provincial level; Municipal Census Department at municipal level.

Prefects and Mayors, with reference to the territories under their jurisdiction, ensured the proper performance of census activities, according to current law provisions and to the census performance regulations pending of issue.

1.3.1. At National Level

1.3.1.1 The National Statistical Institute (ISTAT)

Art. 37 of Law no. 144/99 and the performance regulations being adopted entrust the performance of the agricultural census to the National Statistical Institute. Istat, as the survey holder, has technical and methodological decisional power on census organization and on census performance
practices. In particular, the Institute instructed the various components of the census network as required for the performance of the census and supervise all the related activities, taking the necessary measure for their proper and timely performance.

Istat exercised such functions also through its territorial organizations, i.e. the Regional Departments. For the performance of census activities Istat might avail itself of the statistic offices of the national statistical system (Sistan) that, according to art. 6 of the regulations, acquired the legal status of census bodies. In order to ensure census performance and quality, in certain cases Istat might exercise the functions of other census bodies and therefore might have the activities carried out by its own staff. In these circumstances, Istat might also proceed with the most appropriate actions against census bodies or the persons in charge of census operations, in the event of defaults that might prejudice the proper performance of census operations.

1.3.1.2 Unioncamere

The statistics department of Unioncamere, which is part of the national statistical system, supported Istat and the Chambers of Commerce in ensuring their operation concerning census activities. The statistics department of Unioncamere has had therefore:

- verify that the chambers of commerce take the necessary actions to set up the provincial census departments and to perform their tasks;
- cooperate with Istat in the monitoring of census operations;
- report to Istat any situation that may hinder the proper development of census operations so that Istat might take the necessary countermeasures;
- supervise any other activity aimed at ensuring the proper performance of census operations at provincial level.

1.3.2. Regions

Census organization at regional (and autonomous province) level is based on the "variable geometry" pattern defined in the Istat/Regions Protocol of Understanding, i.e. on this census plan, integrated by individual regional census plans as approved by Regions and autonomous Provinces, also on the basis of the organizational, technical and methodological assessments carried out by Istat. From an organizational point of view, the competencies and functions of Istat's territorial departments and of the dedicated regional department have been integrated with one another.

The heart of the organization was the Regional Census Department (UCR), while census functions of regional concern has been carried out locally by the network of inter-municipal coordinators and their provincial supervisors. UCRs have been also responsible for providing assistance and technical support to the Regional Technical Commission, that has been not a census body but supervises the proper development of operations in the territory of its concern and evaluates monitoring results.
1.3.2.1 Istat’s Regional Departments

Istat's regional departments supervised all the activities carried out by census bodies at local level. Therefore, in agreement with UCRs, they made sure that regional census plans were implemented, with particular reference to the appointment of inter-municipal coordinators and their provincial supervisors, to training, briefing and information-spreading activities, to data recording as applicable and to the performance of pilot and control surveys. For such purpose, the regional departments cooperated with UCRs and UCPs in organizing briefings aimed at explaining the technical and organizational features of census operations. The regional departments evaluated also the periodical reports on the progress of census operations in the territories they were responsible for, perform inspections and any other action required to ensure the best performance of operations.

In order to ensure the coordination of census activities at local level, Istat's regional departments appointed provincial reference contacts, who liaised with the UCPs and the provincial supervisors of inter-municipal coordinators to help them define all the interventions aimed at ensuring the proper performance of census operations in provinces. These provincial reference contacts were members in the provincial technical boards created at the Chambers of Commerce.

1.3.2.2 Regional Census Departments (UCRs)

Pursuant to the Protocol of Understanding between Istat and Regions, to Law no. 144/99 and of the performance regulations, and according to the directions provided by Circular ref. 10665 of 10/21/1999, UCR functions were entrusted to the regional statistics department established under art. 5 of Legislative Decree no. 322/89. Any Region lacking such department had to appoint, by December 31, 1999, a provisional statistics department and vest it with UCR functions.

The statistics department manager was responsible for UCR management and for the privacy protection under art. 8 of Law no. 675/96, as subsequently amended and integrated. The UCR might be integrated, as foreseen in individual regional census plans, with professionals from the regional services dealing with agricultural issues.

In general, UCRs supervised the implementation of Istat's and regional census plans and participate in farm surveys by supplying inter-municipal coordinators. UCRs have been also in charge of the following specific activities attributed in mandatory form to Regional Authorities by the protocol of understanding:

- appointment of inter-municipal coordinators (CIC) and their provincial supervisors (RPCIC), in particular:
  - before September 1, 2000 inter-municipal coordinators have been chosen from public employees or contracted professionals, if necessary; their details have been submitted to Istat and to the UCPs working in the territory they had jurisdiction on;
- before May 15, 2000 the provincial supervisors of inter-municipal coordinators have been selected and appointed and their details have been submitted to Istat;
- CICs and RPCICs in charge of privacy protection under Law no. 675/1996 as subsequently amended and under Presidential Decree no. 318 of July 28, 1999 will have been appointed in written;
- the contractual and financial terms with CICs and RPCICs have to been defined, also by means of agreements with employer administrations;
- information campaign in favor of local institutions and farms, in particular with the interventions provided for in regional plans, in close coordination with any similar initiative launched by Istat;
- briefing and training interventions, according to regional plans and to the agreements with Istat;

- operations monitoring, which included:
  - drawing up of regular reports on the progress of the regional plan. A first intermediate report has been submitted by June 2000 and a second report by August 2000 (this was linked to the payment of the second advance of the contribution);
  - regular reports, at regional level, of the information received from UCPs during the survey;
  - collection and regular reporting of the information related to the monitoring of inter-municipal coordinator activities, as received from their provincial supervisors;
  - submission of regular reports to the Regional Technical Commission at the deadlines established in the regional census plans, about the progress of regional plan performance and the developments of census operations, highlighting any criticality to the competent Regional Department of Istat;
  - accounting of the financial contributions received. These activities, also referred to the contributions granted to public and private entities performing survey operations or related activities, was carried out by the main macro-functions upon completion of census operations.

Within the framework of the activities defined as optional by the Protocol of Understanding, UCRs might be called to:
  - provide supplementary training to the training performed by Istat;
  - record census data;
  - perform pilot and quality surveys, making available in particular their own survey network.

The organization of census operations at regional level might be integrated and modified by individual regional census plans. The main additions and modifications described in these plans deal with the following aspects:
- definition of operational liaison between Regions and other local authorities (e.g. Provinces or Mountain Communities) to perform activities that were not under the responsibility of other census bodies;

- training of interviewers in addition to the training provided by Istat;

- new members in the Regional Technical Commission and institution of teams, if required;

- integration of the monitoring to be carried out by inter-municipal coordinators and their provincial supervisors;

- participation in activities related to data recording;

- delivery of census monitoring results back to municipalities.

1.3.2.3 The Regional Technical Commission

Art. 2 of the Protocol of Understanding established that Regions and Autonomous Provinces had to create, by October 31, 1999, a regional/provincial technical commission in charge of preparing the regional/provincial census plan and of evaluating census operations in the territory.

According to the Protocol of Understanding, the Technical Commission included at least the following members: three representatives of the Region (among which the Statistics Department manager and a representative of agricultural services); three experts from the academic world and from the most representative local professional associations in the agricultural field, appointed by the Region; two representatives of the Provinces, among which a Provincial Statistics Department manager, appointed by the regional representatives of the Provinces; one representative of the municipalities, elected by the regional representatives of the municipalities among Municipal Statistics Department managers; one representative of Mountain Communities, appointed by the regional representatives of mountain communities, the Statistics Department manager of the Chamber of Commerce of the region capital; the Statistics Department manager of the Prefecture of the Province of the region capital, instituted under Legislative Decree no. 322/89; the manager of the Regional Office of Istat.

The Commission was chaired by one of the Region representatives, appointed by the Chairman of the Regional Council. The Commission was set up its own technical secretariat, in charge of preparing the items on the agenda and of liaising with the UCR, from which it received regular reports on the activities being performed and on any critical situation.

The Technical Commission, that was not a census body, was in charge of supporting the Region in preparing the regional census plan and of supervising and monitoring the proper performance of census activities. The specific tasks entrusted to the Commission were:

- drawing up of the regional plan and its review in the light of Istat recommendations;
- evaluation of plan implementation progress, also in the pre-survey phase;
- evaluation of census progress on the basis of the regular updates provided by the UCR;
- identification of the actions to take in any critical situation that could not be solved by the UCR, the UCP and the Regional Department of Istat.

1.3.3. Provinces

The organization of census operations at provincial level played a strategical role for the census, as it represented the main technical core of the regional monitoring system. It was based on two bodies: the Provincial Census Department (UCP), a census body in strict sense, and the Provincial Technical Board, in charge of evaluating and comparing the institutional skills and experiences available in the provincial territory.

1.3.3.1 The Provincial Census Department (UCP)

This census body was established by the Chambers of Commerce, Industry, Handicraft and Agriculture, and supervised the coordination of census operations at provincial level. According to the modalities set forth in the Istat Circular no. 38 ref. 10465 of October 15, 1999, each Chamber of Commerce, Industry, Handicraft and Agriculture appointed its own Statistics Department established under Legislative Decree no. 322/89 as Provincial Census Department. In the autonomous provinces of Trento and Bolzano and in the autonomous region Valle d'Aosta the UCP functions was performed by the respective Statistics Department, according to the different statutes they are governed by.

The Chamber of Commerce Statistics Department manager was also the UCP manager and as such will supervise the Provincial Technical Board. He also was in charge of the survey under art. 8 of Law no. 675/96 as subsequently amended and integrated.

The UCPs promoted, coordinated and supervised all the census activities performed by the UCCs. The UCPs had organizational functions which were essential for the survey, as well as instruction and training functions and organizational support and activity monitoring functions, performed with the help of a dedicated IT link.

According to art. 37c), paragraph 2, of Law no. 144/99, UCPs selected and exploited the human resources required to perform their functions (these resources have been identified as provincial coordinators) under term employment contracts, also in derogation to the limitations provided by collective labor agreements, i.e. under professional assignments as per Law no. 29/1993, but only for the period strictly necessary for the performance of census operations.

Specific UCP tasks was:

- organization of and participation in briefings on census activities, also by making premises and information tools available for the purpose;
- creation of the IT link to Istat for data transmission over the Internet;
- technical/organizational liaison with the provincial supervisors of inter-municipal coordinators, in order to ensure the effectiveness of the latter;
- logistic support to the provincial representative of Istat, an employee of the Regional Department having territorial jurisdiction;
- development, in agreement with the provincial supervisor of inter-municipal coordinators, of the technical assistance plan and schedule of inspections to UCCs
- notice to UCCs reporting the names of the inter-municipal coordinators and their provincial supervisors;
- quantity monitoring of census activities in the territory of their concern, through the analysis of the reports received from UCCs;
- solicitation of reports from UCCs;
- uploading of UCC and inter-municipal coordinator supervisor reports to the online network;
- inspection and control of census activities in the territory of their concern, in case of troubles occurred in individual municipalities;
- reporting of any criticality that could not be solved at UCP level to the UCR and Istat's Regional Department;
- drawing up of periodical reports on census activity progress at provincial level;
- promotion of communication and advertising initiatives about the census, also through their own public relations departments, in close cooperation with Istat's Regional Department;
- collaboration for the development of instructions to the interviewers and to the municipal coordinators, in cooperation with the inter-municipal coordinators and Istat's Regional Departments;
- performance of any supplementary training foreseen by the regional census plan;
- follow-up of other activities aimed at ensuring the proper performance of census operations in the province.

1.3.3.2 The Provincial Technical Board

The presence in the province of various components of the census network working in different sectors of activity called for the creation of a body where the various professional profiles and skills had to converge. This was the Provincial Technical Board which, pursuant to the Protocol of Understanding between Istat and Regions and to the recommendations contained in Circular ref. 10665 of October 21, 1999, represented the functional link among the various levels of census responsibility at provincial level, for the purpose of developing the technical assistance program to UCCs, scheduling activities
and interventions of various nature, as well as of evaluating the overall census progress.

According to the specific functions of technical coordination of census operations entrusted to the UCP, the UCP manager had act as Board coordinator. The provincial supervisor of inter-municipal coordinators and the provincial representative of Istat for census activities was also members of the Board.

Each regional plan, respecting the responsibilities and competencies described above, might appoint other members in the Board in order to reach synergies apt to ensure the proper performance of census activities.

1.3.3.3 Provincial Supervisors of inter-Municipal Coordinators

These supervised at provincial level the technical assistance to farm survey activities. Provincial supervisors of inter-municipal coordinators were selected by the UCR among the employees of Regional Authorities or of local agencies and bodies having agricultural expertise, and recognized professional skills and experience in the field.

Provincial supervisors referred to the UCR for their census-related appointment. Under a technical/organizational profile they cooperated with the UCP and:

- allocate the municipalities in their province under the responsibility of the various inter-municipal coordinators;
- prepare, together with the UCP, the activities plan of inter-municipal coordinators and for such purpose, and, in order to line up their activities with those of the UCP, are members in the Provincial Technical Board;
- perform the training (and the supplementary training as required) of interviewers;
- organize post-census surveys as appropriate.

As to monitoring activities, the RPCICs sent reports every two weeks to the UCP and the UCR on the activities of inter-municipal coordinators, the technical assistance lent to the UCCs in the collection of information through direct interviews to farmers and through questionnaire reviews.

1.3.3.4 Inter-Municipal Coordinators

Inter-municipal coordinators (CIC) was professionals who controled and inspected the interviews to farmers. The total number of inter-municipal coordinators was established in individual census plans.

CICs was chosen mainly among the employees of local administrations (Regions, Provinces or other public authorities) with proven experience and expertise in agricultural matters, achieved through certain and documented professional careers. If there were no public employees with the required skills, UCRs appointed persons outside the public administration as inter-municipal coordinators, using the contractual typologies foreseen by art. 37d),
para. 2, of Law no. 144/99 (professional collaboration, subordinate steady collaboration, occasional independent work).

Inter-municipal coordinators was covered by an insurance against all injuries arising from census activities and resulting in death or permanent disability; in the case of coordinators who were subordinate employees, the insurance covered only the services rendered after normal office hours.

The specific duties of CICs were:

- to instruct municipal coordinators and interviewers;
- to provide technical assistance to UCCs, during the surveys, in the form of visits and inspections during which they would:
  - perform sample or complete audits of the questionnaires filled out;
  - assess the interviewers' and municipal coordinators' knowledge of census technical rules and, if necessary, give the adequate instructions to correct any misbehavior;
- to submit weekly reports to the provincial supervisor on census progress in the territories of their concern, providing information about the quantity and quality of the questionnaires filled out and the main troubles encountered during farm interviews, etc.

1.3.4. Municipalities

Census organization at municipal level was the basis of the entire system and represented the only source of census information, the collection of which was responsibility of the Town Authorities.

1.3.4.1 Municipal Census Departments (UCC)

Census operations at municipal level were carried out by Municipal Census Departments (UCCs). In its letter ref. 8240 of 7/30/99, Istat invited the municipalities, in view of their involvement during the general censuses of 2000 (agriculture) and 2001 (population, housing, buildings, industry, services and institutions), to establish their respective UCCs as soon as possible, following the recommendations contained in Circular no. 38 of October 15, 1999 (ref. 10465).

UCCs were established in either one of the following ways:

- entrustment of functions to the Statistics Department established under Legislative Decree no. 322/89;
- entrustment of functions to the UCC created for the intermediate census of industry and services, long form phase (under Law no. 681/96);
- entrustment of functions to an employee/service of the municipality, to act as contact;
- creation of a Statistics Department in associated form.

The UCC manager was responsible for the survey pursuant to art. 8 of Law no. 675/96 as subsequently amended and integrated. If the farms to be
surveyed were more than 600, the employees working in the Department (besides the UCC manager) was appointed as inter-municipal coordinators. The UCCs were in charge of carrying out the survey in the territory. In particular, they had to:

- appoint other municipal coordinators as appropriate, if the farms to be surveyed in their municipality were more than 600, by October 1, 2000;
- select the interviewers, who must be appointed by September 15, 2000 (and be available at the UCCs no later than October 7, 2000);
- participate in the briefings for interviewers and municipal coordinators;
- verify, control and update the lists of farms to be surveyed;
- collect information from the farms and see that the questionnaires were filled out correctly;
- notify to the competent UCP the start of interviews and the progress of census operations, by submitting appropriate reports;
- summarize at municipal level the reports received from municipal coordinators;
- package and ship census materials, keep the accounting and submit the survey close statement;
- perform any other activity required to ensure the proper performance of census operations.

1.3.4.2 Municipal Coordinators

These were the persons in charge of planning, coordinating and controlling farm survey activities. In municipalities with up to 600 farms to survey, the UCC manager acted as coordinator. In municipalities with more than 600 farms survey, the coordinators were either employees or independent professionals. The number of coordinators was proportional to the number of interviewers, normally by a one to six ratio. In any case there were not more than ten coordinators in each municipality.

Coordinators were chosen among municipal employees with expertise in statistic surveys or, if there were none such employees, among independent professionals, appointed with the contract typologies described in art. 37 of Law no. 144/99. The educational background of coordinators must be at least of high school level and documented, as any other element of evaluation required for their appointment. University degrees obtained in schools and universities specialized in agricultural, economic and statistical disciplines, as well as the membership in association of agro-technical professionals, was preferential.

Coordinator services were covered by an insurance against all injuries arising from census activities and resulting in death or permanent disability; in the case of coordinators who were subordinate employees the insurance covered only the services rendered after normal office hours.
Municipal coordinators surveyed interviewer activities daily, supported them, organized the surveys in the territory, drew up the summary reports of the activities performed, cooperate with inter-municipal coordinators in the activities of their concern. In particular, municipal coordinators had to:

- review, also in terms of quality, the job done by UCC interviewers on a daily basis;
- support the interviewers;
- draw up summary reports containing the data related to certain variables surveyed by the interviewers, and submit the summary reports to the UCC manager.

1.3.4.3 Municipal Interviewers

These were the persons who interviewed the farmer managers and collected the information by filling out the questionnaires according to the answers received during the interviews. The UCC manager appointed an interviewer for every 150 (or fraction thereof) forestal and zootechnical farms to be surveyed in the municipal territory; if the farms were scattered over a vast territory, the municipalities might allocate a lesser number of farms to each interviewers, but in any case no less than 100.

Interviewers were chosen among municipal employees with expertise in statistic surveys or, if there are none such employees, among independent professionals, appointed with the contract typologies described in art. 37 of Law no. 144/99. The educational background of coordinators must be at least of high school level, or junior high school level if supported by a substantial experience in the field.

Applicant interviewers had to produce appropriate documents evidencing their education and any other element of evaluation required for their appointment. University degrees obtained in schools and universities specialized in agricultural, business and statistical disciplines, as well as the membership in association of agro-technical professionals were preferential. Interviewers must be ready to work in any part of the territory under the jurisdiction of the Municipal Census Department.

Interviewer services were covered by an insurance against all injuries arising from census activities and resulting in death or permanent disability; in the case of interviewers who were subordinate employees the insurance covered only the services rendered after normal office hours.

The main duties of interviewers were:

- participation in briefings;
- interviewing farmers and filling out the questionnaires;
- check the exhaustiveness and consistency of the information obtained;
- correct any possibly wrong information by performing a second interview;
- deliver the filled questionnaires to the UCC daily;
1.4. Work process

A census is an extraordinarily complex operation, structured in subsequent stages linked to one another. The respect of the schedule of each stage and, above all, the involvement of the entire survey network are crucial for the success of the entire operation. In order to ensure a continuous monitoring of operations and the immediate intervention to solve any problem encountered, a multi-layered organizational structure was devised, most of which connected online. The following sections describe the various survey stages: in some cases only a brief description of operations was provided, in others more technical details was provided, so as to provide a guide to the functions of the various survey bodies.

Istat issues specific circulars to define the technical and organizational aspects of the census.

During the 1998-1999 period and in early 2000 a thorough technical/statistical analysis was carried out to define the various aspects of the census, with the precious contribution of the Study Commission established by Istat. In particular:

- the survey questionnaire and the definitions and concepts for the detection of surveyed units, of the reference universe, etc. were developed;
- the methodology for the drawing up of the farms lists to be distributed to municipalities during the preliminary stage for the update of the records of surveyed units was developed;
- census data recording plans and the practical references for data control and correction operations were outlined;
- the study of the characteristics of post-census control and quality surveys was started;
- the IT system to be used of data processing was designed;
- the study of the publishing plan was started.

The pilot survey for farm identification and location was carried out in October 1999, while the pilot survey on farm list update took place in May 1999. The farm list update phase was started at the beginning of 2000 and was completed by June. In May 2000 was also started the last pilot survey, aimed at verifying the overall quality of farm list update operations and of the survey questionnaire. In particular, the survey was aimed at assessing coverage problems related to the drawing up of the lists sent to the municipalities and the possible presence of mistakes committed by these during the update process. Also the updated versions of the administrative records already employed to prepare the lists sent to the municipalities were used in this phase, in order to assess their reliability for the purpose of creating the current Statistic Record of Farms and Agricultural Businesses (ASAIA).
On the basis of the material provided by the municipalities and of quality review results, Istat prepared the final lists of farms, divided by municipality and divided, within each municipality, by cadastral map, which temporarily represents the significant portion of census for the organization of interviewer activities. Furthermore, based on the results of the pilot survey, Istat prepared the final version of the survey questionnaire to be adopted in the census.

1.5. Publicity campaign

The success of the survey depended on the degree of collaboration by interviewees and on the efforts of all survey network components. Therefore, actions were taken aimed, on one hand, at increasing the interviewees' to collaborate with interviewers and on the other to ensure the highest commitment by survey network components to the performance of all operations. In particular, local public and private institutions working in the agricultural field were informed (for instance, local authorities, guilds and unions in the field, professional associations, schools and professional institutes, etc.)

The success of the survey, in terms of coverage and answer quality, was the goal of all the communication support activities. These activities were focused on:

- **importance and usefulness of the census.** The census represents an important knowledge base also for the resolutions to be taken by local, national and supranational institutions concerning interventions in the agricultural sector. For operators in the field, it is an important knowledge base about the market they work in;

- **survey performance practices.** Here interviewers play a fundamental role, as they act as interface between interviewees and census departments. Creating the right conditions to enable interviewers to receive as much collaboration as possible is essential;

- **importance of the contribution given by individuals to the knowledge of the country.** Rather than reminding interviewees of their obligation to provide the answers, interviewers should suggest that their contribution is precious. The knowledge of rural Italy relies on individual farmers;

- **protection of privacy and statistic secret** throughout the various phases of the survey (data collection, processing and dissemination). In over 70 years of activity, official statistics never failed to comply with their confidentiality obligations towards households, businesses and institutions.

Lastly, each intervention should contribute to strengthen the image of official statistics, also at local level, improving their perception by the public.

Istat has already developed an integrated information plan that has been enriched by the contributions of regional plans. During the half-year period from **June to December 2000** Istat carried out a broad national communication campaign aimed at increasing farm awareness about the census. In particular:
- many different communication channels were used (newspapers, TV, radio, etc.) to inform the nation about the census and to create a favorable climate for the contacts between interviewers and interviewees, who were reassured about the purposes and the usefulness of the survey, as well as about the protection of their privacy;
- creation of a census logo, press advertising, TV commercials, creation of a dedicated website, posters and pamphlets.

There were meetings with public and private institutions in each Region, information campaigns in schools and professional training centers, with special attention to agrarian institutes, meetings with local farms, advertising on the local press, also with the support of the house organs of the various institutions in the field, etc. The involvement of farms was very important, and a number of them had already been contacted by Istat and by the Regions within the framework of regional technical committees.

Census departments might launch local initiatives at regional, provincial or municipal level. Regional Plans include, among others, the following proposals:

- advertising in local newspapers and magazines,
- commercials in local TV channels,
- implementation of information campaigns in agreement with local trade association newsletters, in the form of editorials or otherwise,
- use of public relations departments to spread information about the census;
- posting of bills in public offices,
- creation of information web pages with links to the Istat homepage.
- Under these agreements, Istat provided the bodies in charge of the information campaign with the following materials:
  - census logo artwork
  - 30" commercial (in VHS or Betacam format)
  - posters and pamphlets artwork
  - advertising artwork
  - copies of posters and pamphlets
  - draft press releases, to be customized by each department.

Istat prepared the official census poster, that were mailed to the UCCs, and posted by same by October 9, 2000.

Other information on the census were made regularly available through the Istat website (www.istat.it) where useful material for local information campaigns might also be found.
1.6. Main changes in the 1990’s

During 1990-2000, Italian farms knew significant changes in both structural and socio-economic and environmental features. Structural transformations which involved the Italian agriculture in the whole may be schematised as follows:

- a decrease in the total number of farms (about 13%), most pronounced and uniform diffuse in northern regions;
- a cutback in total farming area;
- a most reasonable decrease in utilised agricultural area principally due to wild and rural lands of public bodies who no more owns farm characteristics;
- an increase of medium size farms;
- a bigger productive specialization;
- a large reduction in small and medium size farms;
- a significant concentration of agricultural economy in big farms (over 20-30 hectares of utilised agricultural area), causing damage especially to medium size farms;
- a farm closer connection with territory and market;
- a larger entrepreneurship by the farms' owners;
- a bigger concern services supply (technical assistance, information, third party resort etc.);
- a continuous transformation of farms in agricultural enterprises;
- a much more clear farm versatility, principally for small and medium concerns;
- a shake-out of traditional business which is a vantage for those business pressed by the market demand.

2. CHARACTERISTICS

2.1. Characteristics

At the beginning of October, the UCCs received the materials required for the survey, in particular:

- the list of farms to be surveyed;
- copies of the questionnaires for the farms;
- copies of the interviewers' and municipal coordinators' guides;
- the supporting material required for survey and monitoring activities, as well as for the forwarding of the information collected after the survey.
From October 1 to 20, the UCCs carried out the preliminary operations described in the specific circular letters, in order to prepare the material for each interviewer, define their "section itineraries", participate in briefings, etc. Starting from October 23, 2000 the interviewers hired by the UCCs interviewed personally the farmers according to the following schedule:

- from October 23 until November 22, 2000 for municipalities with less than 100 farms to be surveyed;
- from October 23 until December 31, 2000 for municipalities with 100 or more farms to be surveyed.

As mentioned before, interviews were concentrated in almost 60 business days (including Saturdays) and therefore a greater number of interviewees than in the last census had to be employed. In particular, according to the performance regulations pending of approval, personnel requirements were the following:

- about 27,000 interviewers, each in charge of 150 farms on average, located as a national average in some 15 cadastral maps taken as survey sections;
- about 9,700 municipal coordinators and UCC managers (total of both): this figure was proportional to the number of interviewers and farms to be surveyed;
- about 1,200 inter-municipal coordinators and their provincial supervisors (total of both).

Municipal coordinators reviewed survey questionnaires daily at the UCC, as soon as the filled questionnaires were delivered daily by interviewers. The review took place from October 23, 2000 until January 12, 2001 and was carried out with the aid of inter-municipal coordinators, who visited the UCCs on a regular basis, to straighten out any doubts, provided technical support to the survey, identified any unclear issues arisen while talking with coordinators, etc.

As soon as the review of all the farm questionnaires filled out by interviewers was completed, the UCCs drew up the reports containing the data on the main variables surveyed. As these reports were prepared, and in any case before January 18, 2001, each UCC collected the reports at municipal level, filled out the relevant form prepared by Istat and sent form and reports to the UCP competent by territory, for the preliminary diffusion of census results.

Census results was assessed by means of a monitoring system based on the periodic reports sent by UCCs to UCPs. These reports were loaded into the dedicated on-line network and displayed in real time to regional census departments (UCRs) and to Istat. In more detail, the monitoring included the following activities:

- **municipal census departments** had to:
  - inform the competent UCP about the date of survey start following subsequent directions and according to the number of farms surveyed, send to the competent UCP, by fax or e-mail, the specific
form reporting the number of questionnaires filled and the number of viticultural and zootechnical farms;

- at the end of the survey, provide the UCP with the specific forms reporting, among other things, the final number of farms surveyed, the number of farms that could not be interviewed, the number of viticultural and zootechnical farms, the latter sorted by cattle, sheep or other animal breeds, summary data;

- **provincial supervisors of inter-municipal coordinators** had to:
  - submit to the locally competent UCP and UCR, every 14 days, a report on the activities of the inter-municipal coordinators supervised, filling out the specific form prepared by Istat. The form covered, for each inter-municipal coordinator, the number of visits carried out at each municipality he/she is responsible for, the number of questionnaires reviewed together with interviewers and municipal coordinators, any difficulties encountered by interviewers in filling out the various parts of the survey questionnaires, any troubled encountered by the municipalities;

- **provincial census departments** must:
  - upload the information obtained from UCCs and inter-municipal coordinator supervisors on the Internet, try and solve any problem encountered during the monitoring; if, nevertheless, these problems persist, UCPs will immediately inform the UCR and the Istat Regional Department competent by territory;

- **regional census departments** had to:
  - summarize at regional level the information obtained from UCPs using the specific forms prepared by Istat and e-mail them to Istat and to the competent Regional Technical Commission. UCRs also intervened promptly to solve any problem encountered during the monitoring, in close cooperation with the UCPs and with Istat Regional Departments.

The online monitoring were performed over the Internet, with access to monitoring areas limited to authorized persons only. Therefore, both UCPs and UCRs needed to be connected to the Internet, unless agreements allowing individual municipalities to use online tools to send reports to UCPs were reached at regional level.

### 2.2. Questionnaire

Designing a survey questionnaire for an agricultural census certainly requires to take into account the increasing and pressing information needs of public and private users, and the need to minimize the burden unto the interviewee and the interviewer. In order to prepare the questionnaire for the next census, the Study Commission has carefully reviewed:

- the requirements arising from the obligation to meet European and national regulatory provisions;
- the FAO recommendations aimed at ensuring the trans-national comparability of the definition adopted and of census results;
- the need to ensure a certain continuity with past censuses in order to allow historic analyses of how this sector is developing in Italy;
- the opportunity to represent the new phenomena emerging from the agricultural system, which have important links to demographic and social, environmental and economic aspects, and also make up the basis for the interventions of super-national, national and local organizations.

The study activity has led to the definition of a proposal questionnaire, later submitted to an ad-hoc pilot survey. The proposal showed a satisfactory comparability of census output over time, and also extended the information domains to cover new phenomena. It was highlighted that the building of the Statistic Record of Farms and Agricultural Businesses (ASAIA) and its annual update allowed for a more intensive use of sample surveys on specific issues: therefore, it often happened that the main goal of the survey questionnaire was to identify (even through questions of a merely qualitative nature) the presence and significance for the farm of certain phenomena, that may be studied in the future in further detail by means of specific sample surveys\(^5\).

The questionnaire was distributed to all farms. However, a system of "filter questions" allowed to submit certain sections only to farms with given requirements.

The individual sections of the questionnaire covered the following information:
- general information on the farm (form of management, legal status, product sale activities if any, etc.);
- information on the use of land (in the agricultural year from November 1, 1999 until October 31, 2000) for the main crops and the secondary purposes (sowed fields, woody crops, etc.), particularly concerning viticulture, pursuant to the applicable EC regulations;
- information on irrigation systems, rural buildings, on the other facilities and dwellings located in the farm area;
- information on the stock bred (head number, type, animal shelters, milk production, etc.);
- information on the use of mechanical means and their use (e.g. on account of third parties);
- information on the labor employed in the farm;
- information on the adoption of biologic cultivation practices, quality crops, on the environmental impact of farm activities, etc.;

\(^5\) Also Istat's decision to carry out the farm structure survey every year instead of every two years as established by EC regulations was interpreted in this view (the 2000 survey was obviously suspended). In fact, this survey was based on a questionnaire that was partly fixed and partly variable, which may challenge different issues from time to time (e.g. environment, employment, quality crops, etc.)
- information on how the technical equipment is purchased, how farm activities are carried out, how products are marketed, how information technology support is used.

The last section of the questionnaire was aimed at summarizing, for each cadastral map occupied by the farm, certain information on the areas used for different cultivation practices and on the number of certain types of animals bred. This allowed to obtain an extremely detailed map of land use, as well as valuable information on the use of individual portions of land and hence on the actual distribution of farming activities.

3. SURVEY METHODOLOGY

3.1. Preparing the survey operations

Thinking at this phase as “Planning the Survey”, it's firstly possible to find 5 steps:

- Definition of Legal and Regulatory Issues
- Definition of Technical/Statistical Issues
- Creation of the Census Network
- Census Network instruction and training
- Integrated Information Campaign

- Definition of Legal and Regulatory Issues
As seen above, the regulations were adopted by the Council of Ministers in the meeting of March 14, 2000 and was submitted to the General Accounting Office for the preventive legitimacy verification.

- Definition of Technical/Statistical Issues
During the 1998-1999 period and in early 2000 a thorough technical/statistical analysis was carried out to define the various aspects of the census, with the precious contribution of the Study Commission established by Istat. In particular:

- the survey questionnaire and the definitions and concepts for the detection of surveyed units, of the reference universe, etc. were developed;
- the methodology for the drawing up of the farms lists to be distributed to municipalities during the preliminary stage for the update of the records of surveyed units was developed;
- census data recording plans and the practical references for data control and correction operations were outlined;
- the study of the characteristics of post-census control and quality surveys was started;
- the IT system to be used of data processing was designed;
- the study of the publishing plan was started.

The pilot survey for farm identification and location was carried out in October 1999, while the pilot survey on farm list update took place in May 1999. The farm list update phase was started at the beginning of 2000 and completed by June. In May 2000 was also started the last pilot survey, aimed at verifying the overall quality of farm list update operations and of the survey questionnaire. In particular, the survey was aimed at assessing coverage problems related to the drawing up of the lists sent to the municipalities and the possible presence of mistakes committed by these during the update process. Also the updated versions of the administrative records already employed to prepare the lists sent to the municipalities were used in this phase, in order to assess their reliability for the purpose of creating the current Statistic Record of Farms and Agricultural Businesses (ASAIA).

On the basis of the material provided by the municipalities and of quality review results, Istat prepared the final lists of farms, divided by municipality and divided, within each municipality, by cadastral map, which temporarily represented the significant portion of census for the organization of interviewer activities. Furthermore, based on the results of the pilot survey, Istat prepared the final version of the survey questionnaire to be adopted in the actual census.

**Creation of the Census Network**

The organization of the census network was defined by Istat taking into account the contribution given in Study Commission by the representatives of municipal associations (National Association of Italian Town Authorities (ANCI) and Statistic Union of Italian Municipalities (USCI), of Chambers of Commerce and of Regions. Such organization was also fully compliant with the policies agreed between Istat and the Regions (as established by the Protocol of Understanding), implemented in individual regional census plans.

The significant aspects of the various phases of census network creation were outlined here:

- all Town Authorities, Chambers of Commerce, Regions and Autonomous Provinces of Trento and Bolzano created a Census Department as soon as possible, in any case by June 2000, i.e. well before the start of census operations, according to the practices described in Circulars no. 38 of October 15, 1999 ref. 10465 and of October 21, 1999 ref. 10665; these departments were equipped with adequate human and technical resources to ensure the proper and timely performance of all survey phases;

- by the end of May 2000 Regional Census Departments (UCRs) submitted to Istat the names of the provincial supervisors of inter-municipal coordinators, as well as any important information regarding them;

- the same was due before end of May 2000 by UCRs, concerning the inter-municipal coordinators selected among the employees already on public administration payroll; the appointment of all inter-municipal
The survey took place from October 22 until December 31, 2000 and was carried out in each Municipality with different deadlines according to the number of farms to be surveyed. As compared to the 1990 census, the survey focused on a narrower time span and employ some 27,000 interviewers (instead of the 14,000 employed in the previous one). Considering the program of preparatory activities (briefings, material and itinerary organization, etc.) and post-survey activities (quality surveys, forwarding of material, etc.) interviewers were available at the UCCs no later than October 7, 2000.

3.1.1. Census frame

The fundamental phase propaedeutic to the fifth Agricultural Census was the holding's list updating operations owned by ISTAT.

The phases of the updating were the following:

- a) Identification of existing, no longer existing and new agricultural, forestal and zootechnical holdings;
- b) List updating;
- c) Holding core location;
- d) Indication of the agricultural holding areas by cadastral map;
- e) Information exchanges between municipalities about holdings having the holding core in a municipality and having some areas situated in other municipalities;
- f) Compilation of summaries

In order to make easier the updating, ISTAT planned a multimedia CD with the aim to give general information about 2000/2001 Censuses and to give instructions to the staff employed.

Besides, ISTAT provided a specific software for the automatic typesetting of the forms.

The holding’s updating list was provided for by EEC Regulation n° 571/88. Moreover, in application of the Regulation n° 2186/93 of the European Council, ISTAT has planning a project with the purpose to create archives to updating from year to year.

These statistical archives consist of:

- a) General complete archive (ASIA base);
b) Central archives which are: “ASIA enterprises”, “ASIA agriculture”, “ASIA institutions”;

c) Satellite archives concerning sectors like handicraft, commerce, tourism.

In order to establish definitively ASIA agriculture with 2000 Agricultural Census data, ISTAT carried out a preliminary updating list of the holdings included in the previous agricultural Census (1990).

This updating used the results of the sample surveys about structure and productions carried out from 1993 to 1997 and the structural and personal data included in different administrative archives. The result of this operation was a reviewed agricultural holding list that constituted the basis for the agricultural holding updating list phase.

The goal of this phase was, therefore, to fill in a complete list of existing agricultural holdings in each municipality and to give information for estimating territorial dispersion of these holdings.

*The updating just described has been absolutely necessary to organize in a very efficient way the 2000 Agricultural Census.*

### 3.1.2. Pilot survey

Before data collection, three pilot surveys were carried out referring to location problems of the agricultural holdings and the related lands and referring to the holding municipal list update:

- The first having the aim to identify the standards for the location and georeferencing of the holding lands through cadastral cartography;
- The second one having the aim to update the holding ISTAT list integrated with the other administrative archives;
- Finally, the third made with the aim to test the structure and the articulation of the holding questionnaire and the related definitions.

### 3.2. Data collection and data entry

#### 3.2.1. Data collection procedures

At the beginning of October, 2000, the UCCs received the materials required for the survey, in particular:

- the list of farms to be surveyed;
- copies of the questionnaires to be administered to farms;
- copies of the interviewers' and municipal coordinators' guides;
- the supporting material required for survey and monitoring activities, as well as for the forwarding of the collected information after the survey.

From October 1 to 20, the UCCs carried out the preliminary operations described in the specific circular letters, in order to prepare the material for
each interviewer, define their "section itineraries", participate in briefings, etc. Starting from October 23, 2000 the interviewers hired by the UCCs had interviewed personally the farmers according to the following schedule:

- from October 23 until November 22, 2000 for municipalities with less than 100 farms to be surveyed;
- from October 23 until December 31, 2000 for municipalities with 100 or more farms to be surveyed.

Such "top-down" training provided the adequate degree of professional skill to all networks components and also involved, in a satisfactory manner in terms of quality, those who were primarily involved in the gathering of information, i.e. the interviewers. These are the last link in the chain of training interventions: each passage from one link to another in this chain is a very delicate phase, and hence the need is for a training plan that should involve the first link of the chain first, enabling it to convey the training received to all the subsequent links, down to interviewers.

As the persons to be trained are many and scattered all over the national territory, and have different training requirements, different training typologies and phases have been devised. Besides conventional in-class courses, also remote training (RT) practices were implemented, with the aid of specific tools (CD-ROMs, Census homepage on the web, etc.).

In-class courses do not show any particular criticality apart from logistic issues and number of trainees. On the other hand, remote training does have certain organizational difficulties, such as the impossibility of being used due to the lack of adequate technology aids. However, the choice of a mixed strategy (class/RT) should allow to check the quality of the training received by the various trainees, and to implement corrective actions, if required, during the inspections to be carried out especially at UCCs.

The training of census network staff was carried out on time for information gathering deadlines. In particular, the training activities was carried out:

- in June for provincial supervisors of inter-municipal coordinators, provincial census department managers and two operators, including the manager, for each regional census department,
- September 11 to 29 for inter-municipal coordinators,
- October 9 to 21 for UCC managers, municipal coordinators and interviewers.

Other training initiatives in addition to survey instructions was carried out by Istat and by regional census departments and involved inter-municipal coordinators and municipal coordinators. Istat prepared suitable materials to provide remote training in August and September to inter-municipal coordinators and to UCR and UCP staff. Such personnel might be required to participate in a meeting aimed at assessing the remote training received in September.

Training materials was made available also to municipal coordinators and interviewers, to complete their training, in October. Interviewer training
assessment and on-the-job training interventions was carried out by inter-
municipal coordinators during inspections aimed at providing technical
assistance to UCCs during the survey.

Other details on the interventions to be carried out by Regions, with practices
to be agreed upon with Istat, are reported in individual regional programs. In
general, these interventions deal with:

- relational issues (interview techniques and methodologies, planning
  and organization, etc.)
- legal issues (EC regulations, laws on statistics, confidentiality, etc.)
- technical issues (statistic methodologies, expertise in agricultural
  statistic surveys, etc.)

The training of UCR staff, UCP managers and provincial supervisors of inter-
municipal coordinators was carried out by trainers selected by Istat and Istat
officials. As agreed with the regions, specific interventions aimed at explaining
individual territorial environments might be carried out by experts chosen by
Regions during the above-mentioned briefings.

The training of inter-municipal coordinators was carried out by Istat and UCR
staff, as well as by provincial supervisors of inter-municipal coordinators.
Inter-municipal coordinators, with the help of Istat staff trained municipal
coordinators and interviewers.

3.2.2. Control of the data

During the data collection an intense, constant and periodic work of
monitoring of the survey operations has been carried out to all the levels.

The Chambers of Commerce, using the Internet network and working with the
Unioncamere statistical office, have checked the municipal district activities
while the regional ISTAT offices have supervised the data collection
managing the census network.

When the survey was completed, UCCs packaged all the materials used for
the collection of information according to the directions given by Istat. The
deadlines for sending farm questionnaires were:

- January 15, 2001 for municipalities with less than 100 farms to
  survey;
- January 31, 2001 for other municipalities in the manner that was
  indicated by a specific circular. Istat was to receive the remaining
  material by the same deadlines above.

The recording of the information contained in the questionnaires is crucial for
the proper performance of the statistic survey. Therefore, following the
directions of the Study Commission, to ensure an effective quality control
during the recording of census data, reduce costs and ensure the maximum
degree of information preservation and security, seven recording centers were
set up across the national territory. These operated in strict compliance with
the technical, operational and security rules dictated by Istat.
The controlled recording took place from September, 2001 until February 2002. Istat established the deadlines, types of verifications, output modalities and rules to follow for privacy protection during recording, leaving the centers free to manage the activities and implementation procedures, but performing itself the constant monitoring and control on the quality and on the compliance with the instructions given. These activities might be carried out by UCRs.

Once the controlled recording was completed, at the established deadlines, all recording centers sent the recorded material to Istat. The recorded material were preliminarily checked for exhaustiveness and compliance with the recording practices established by Istat.

The information recorded were corrected and processed by Istat from February through May 2002.

In line with the update of farm record, the collection of census data were submitted to a quality survey. In particular, as soon as all the information have been collected two surveys were carried out: the first were an area survey aimed at analyzing and quantifying the coverage of the list of farms as resulting at the end of the census survey; the second were aimed at analyzing and quantifying any measurement errors. These surveys took place between February and April 2002 and involved a new interview of a sample of farms with a much simpler questionnaire than the one used for the census, in order to verify that the information collected during the survey match with those collected during quality surveys.

4. PUBLICATION AND DISSEMINATION

The general census of agriculture is an indispensable tool of knowledge to study an activity sector which is experiencing a continuous and articulated evolution. Therefore, the result dissemination program is basically aimed at providing the maximum amount of information to meet the needs of the various user segments.

For the best timeliness and quality of the information produced, the dissemination of census results will cover three kinds of results:

- **preliminary results**: the very first results obtained by processing the UCC reports containing the data on number of farms and areas occupied at national and regional level; these was disseminated presumably in March 2001;

- **provisional results**: those obtained by processing the forms filled out by coordinators and supervisors of municipal census departments concerning the number of farms surveyed and their relevant total and agricultural areas, divided by main form of use, the quantities of cattle, pigs, sheep and goats bred, viticultural farms and the relevant area dedicated to vine-growing, at national, regional and provincial level; these was disseminated presumably in May 2001;

- **final results**: the final census results obtained from the survey questionnaires. These were disseminated starting from June/December
2002 according to a publishing plan reviewed and approved by the Study Commission of Istat.

The definitive information were distributed first of all by means of IT tools, similar to the ones already used for the intermediate census of industry and services, and on hard copy. On the technology side, Istat foresees the implementation of a Data Warehouse, i.e. a database that may be queried directly via the Internet and that will allow user-customizes information processing in many different ways. Also a number of CD-ROMs were printed containing national data and disaggregated data by territorial partition (provinces, regions, etc.). On the printed copy side, the plans foresees the publishing of a series of books of high territorial detail, and of a number of theme books.

Agricultural land "positioning" involved the creation of new census sections, delimited by boundaries certain and referenced to the territory. This will translate in the availability of data at a much higher territorial detail than in the past, beyond the municipal or sub-municipal level, down to individual census sections, which agricultural data may be integrated with the data from other censuses.

The information obtained from the agricultural census will in any case be disseminated in formats allowing to meet the national and international statistic information requirements according to the privacy rules set forth by Legislative Decree no. 322/89 as subsequently amended and by Law no. 675/96 as subsequently amended and integrated, as well as by Art. 11 of the deontology and fair practice code of the National Statistical System. While in general statistic data are disclosed only in aggregated form and according to practices that prevent the persons concerned from being identified, for census information purposes, Art. 37e), para. 2, of Law no. 144/99 dictates the principles and criteria to abide by while disclosing statistical data in disaggregated form. In particular, notwithstanding the provisions of Art. 9 of Legislative Decree no. 322/89, Law no. 144 provides the opportunity to disclose census data at a level of disaggregation under three units provided that:

- the data concern the social/population, economic and employment structure of the country;
- the disaggregation is necessary to meet the international, EC, national and local information requirements;
- the data are disclosed within the restrictions provided for by Law no. 675/96, as subsequently amended and integrated, concerning private information.

The census performance regulations, pending of issue, have adopted such principles and criteria and also specify the types of census data for which, whenever the above conditions apply, the data may be disclosed in non-aggregated form at a rate below three units. These data are: number of production units and main characteristics of each farm, basic structural features of each farm such as management and accounting systems, legal status, distribution of farm products, area occupied and use of the land,
distinguished between greenhouse and full-area cultivation, irrigation, rural installations and buildings, areas dedicated to vine-growing or to specialized flower growing or decorative plant nurseries, number of animals bred, milk production and processing, use of mechanical means and information technologies, labor resources, quality products and agronomic practices, agriculture-related activities, location of farm, its land and breeding facilities. Article 18 of the regulations excludes specifically the disclosure in disaggregated form of the private information as per Art. 22 of Law no. 675/96 as subsequently amended and integrated.

This is the reason why the Study Commission created by Istat to prepare the agricultural census is drawing up the list of variables that may be disclosed even in non-aggregated form, i.e. at a rate below three units. On the basis of this study, Istat will develop the detailed dissemination plan for both computerized and hard-copy data.

5. SUGGESTIONS FOR FURTHER TASKS

MANCANTE

6. METHODOLOGICAL NOTES

In according to what has been done in the updating phase of the agricultural holding farms records,
also the data collections has been subjected to quality surveys.

In detail there were been carried out two different surveys with the aim to estimate measurement errors and the covering level. The first survey has been managed according to the CATI model from a proper call center on a sample of about 8,500 holding farms, selected from 194 municipalities placed in every regions, instead the second one (at the moment in processing) is an areal investigation based on a sample of 197 cadastral maps and include, for the most part of regions, the regional network which has to carry out reinterviews and control of surveyed data activities.