



FARM STRUCTURE SURVEY 1999/2000
NATIONAL METHODOLOGICAL REPORT

Member State: LUXEMBOURG

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SUMMARY

On 15 May 1999, STATEC conducted a detailed agricultural census in the Grand Duchy of Luxembourg. This census served as the basis for the 1999/2000 EUROSTAT survey on the structure of agricultural holdings.

The census was carried out via municipalities, which at the end of April received the blank questionnaires and other documents relating to the census. The municipal authorities were responsible for operations in the field. They appointed and instructed the interviewers who, in May 1999, conducted individual interviews with farmers to obtain the data required by the questionnaire. The interviewers and municipal authorities each checked the completed questionnaires for any errors and omissions.

The municipalities sent the questionnaires and other documents by mid-July 1999 to STATEC where the questionnaires were keyed in and checked using BLAISE software. Administrative sources were used only to check the accuracy of the data supplied by a questionnaire. Recourse to administrative data is actually as yet only just beginning in Luxembourg and is beset by identification, definition and confidentiality problems.

Processing of the data at STATEC was completed at the end of January 2000 with the drawing up of national tabular results. A table of correspondences between the national codes and Community codes was drawn up in the spring of 2000 and the file with the individual data for EUROSTAT was ready in the autumn of that year. STATEC then relayed the data to EUROSTAT using the STADIUM system and validation of these data was able to be completed in December 2000.

The role of the municipalities was critical. Exhaustive agricultural censuses are conducted yearly in Luxembourg and both the municipal authorities and the census takers are experienced and thoroughly familiar with the region and the farmers, so that all the holdings are recorded in the census and complete and reliable replies are obtained more easily. The non-response rate was thus only 0.5%.

Provisional national results were available from July 1999; definitive national results were available in February 2000 and published in STATEC Bulletin No 4/2000 in June 2000, when this publication was sent to the media. The key results are accessible via the internet and available on CD-ROM.

The quality of the results obtained by the census is good. The response rate was very high, so that the use of estimates or derived figures remained minimal. Moreover, processing the data could not give rise to any major errors, seeing that a capture and control programme of the BLAISE type was used.

1. INTRODUCTION

1.1. Historical background, scope

Surveys on the structure of agricultural holdings have been carried out by the Member States within the Community framework since 1966/67. Since 1970/71, basic surveys have been carried out every 10 years in accordance with the FAO recommendation on a world agricultural census. The 1999/2000 basic survey is the latest of these surveys.

In the Grand Duchy of Luxembourg, surveys on the structure of agricultural holdings have been carried out every year since 1953 by means of the annual census of agriculture of 15 May. This census is the culmination of the developments described below.

The collection of data on livestock goes back to a Government decision of 19 May 1852 instituting an annual general livestock census in July. A Grand-Ducal decision of 23 October 1904 introduced the three-yearly frequency of censuses and shifted the reference period to the first 10-day period in December. Since 1953, these data have also been collected in May as part of the annual agricultural census.

The collection of data on agricultural areas goes back to 1906. This collection was, however, based on estimates before the Second World War, save in the case of bread-making cereals which were already the subject of censuses during the years 1922 to 1939. It was only as from 1943 that a record was made of the areas by annual censuses. In its present form, the annual agricultural census goes back to 1953. Save in the case of vineyards (10 ares and over since 1977), the criteria which determine the obligation to make a declaration have not changed since then.

1.2. Legislation

Council Regulation (EC) No 2467/96 of 17 December 1996 amending Regulation (EEC) No 571/88 on the organisation of Community surveys on the structure of agricultural holdings, constitutes the legal basis at Community level for the period 1999 to 2007. It was published in the Official Journal of the EC No L 335 of 24 December 1996.

Nationally, surveys are based on the Act of 9 July 1962 organising a Central Service for Statistics and Economic Studies (Organic Act of STATEC). This Act provides for the establishment of STATEC and authorises it to organise statistical surveys. For the annual agricultural census of 15 May, this Act is implemented by the Ministerial Regulation of 31 March 1982, which specifies the date and scope of the survey, the reference period, the frequency, detailed organisational rules and the set of characteristics which must be covered by the survey.

- **scope and coverage**

Article 2 of the Regulation establishes the scope of the survey. The survey units are:

- a) all holdings with a utilised agricultural area of one hectare or less and including arable land, meadows and pastures, gardens, orchards, vineyards, nurseries and willow beds;
- b) all farmers of vegetable, fruit or flower crops, nurseries or willow beds farmed on a commercial basis, even if the utilised agricultural area is less than one hectare;
- c) all farmers of vineyards of an area of 10 ares or more;
- d) all farmers of livestock or poultry enterprises operated commercially.

The census takes place at the holding headquarters. All the land farmed must be mentioned, whether it is in the actual municipality in which the survey takes place, in other municipalities of the country or abroad. The areas leased must not be declared by the owner but by the tenant. Areas covered with grass and other cultivated areas whose products are subsequently auctioned must be indicated by the person who enjoys the right of disposal on 15 May. Only those holdings subject to the survey by virtue of the provisions above must declare their livestock.

Holdings with a utilised agricultural area of less than one hectare which:

- a) possess woods and coppices with a high proportion of oaks,
- b) rear saddle horses,
- c) fatten pigs for their own consumption,
- d) grow vegetables, strawberries, etc. for their own consumption.

are not subject to the survey .

The census is exhaustive. All the holdings covered by the survey appear in the national programme of tables. They constitute the scope of the survey which is therefore identical to the field of observation.

- **frequency of censuses and reference dates**

Article 1 of the Regulation states that the census will take place yearly on 15 May.

- **responsibility for the organisation of the census**

The tasks are apportioned between STATEC and the municipal authorities. STATEC draws up and sends the questionnaires to the municipalities and after that conducts operations in the field for the capture and processing of the data and for preparing the tables and the publication of results. On the other hand, Articles 3, 4 and 5 of the Regulation indicate that the census will be conducted by municipality and will be organised in the field by the municipal authorities, which will see that all the holdings are recorded and which are responsible for the proper implementation of the operations for sending the verified and completed questionnaires to STATEC.

- **administrative and financial provisions**

Article 6 of the Regulation provides information on the arrangements for the payment of the allowances granted to the interviewers and to the municipal

officials responsible for control. These allowances are fixed by the Ministerial Regulation and are proportional to the number of questionnaires duly completed.

- **obligations of the respondents at the time of the census**

Article 7 of the Regulation refers to the STATEC Organic Act of 1962, which lays down in Article 7 that responding to the STATEC's surveys is compulsory and that refusal to respond or providing inaccurate information will result in liability to a fine.

- **identification, protection and obligations of the interviewers**

The interviewers are chosen by the municipalities. Respect for statistical confidentiality in the case of officials, census takers and all other persons involved in census work is stipulated in Article 8 of the Regulation and in Article 7 of the STATEC's Organic Act. Disciplinary or criminal penalties are provided for.

- **changes planned in the legislation**

The Ministerial Regulation of 31 March 1982 organising an Annual Census Of Agriculture is being changed into a Grand-Ducal Regulation. Municipal authorities will be able to carry out the census by post in future.

1.3. Methodological changes during the 1990s

The fact that the number of holdings recorded in the census decreased from 3 945 on 15 May 1989 to 2 814 on 15 May 1999 has not changed the methodology but has nevertheless facilitated operations. Otherwise, only a few changes in connection with characteristics recorded in the census as regards the survey in the field need to be noted. On the other hand, as regards the processing of data at STATEC, the almost entire computerisation of the procedures over the last decade (capture by BLAISE software, SPSS tabulation programmes, etc.) should be mentioned.

2. CONTENTS

2.1. Characteristics

The characteristics recorded and their definitions generally correspond to those of Commission Decisions 98/377/EC of 18 May 1998 and 2000/115/EC of 24 November 1999, both in the case of the variables on agricultural areas and livestock and in the case of agricultural installations and machinery and the labour force.

- **EUROFARM variables not recorded**

Some of the characteristics laid down for the Community survey were not recorded in Luxembourg, either because they were optional or because they were non-existent or insignificant.

The characteristics in question are durum wheat (D02), rice (D07), tobacco (D13a), hops (D13b), cotton (D13c), sunflower (D13dib), soya (D13dic), aromatic plants, medicinal and culinary plants (D13dii), fresh vegetables, melons and strawberries (open field) (D14a), leguminous forage plants (D18bii), arable land seeds and seedlings (D19), rough grazings (F02), fruit and berry species of sub-tropical climate zones (G01b), nuts (G01c), citrus plantations (G02), olive plantations (G03), other wines (G04b), table grapes (G04c), raisins (G04d), permanent crops under glass (G07), wooded area managed mainly for selling the wood produced (H02f), wooded areas with short rotation (H02g), breakdown of successive secondary crops (I01a-101c), mushrooms (I02), irrigated area (I03), combined crops (I05), covered storage facilities (I07c), the distinction between males and females in the case of bovine animals under one year old (J02a, J02b), farmed deer (J19a), irrigation equipment (K10), number of working days undertaken by persons not employed directly by the holder (L10), and any salaries or wages which may be received by holders (L01), spouses (L02) and other members of the family (L03).

Mergers of agricultural holdings have not been taken into account as such, since this development was marginal in 1999. A distinction has therefore only been made between natural persons and legal persons (State, municipalities, associations of municipalities, public utility establishments, non-trading and commercial companies, etc.), the heading under which holding mergers were classified.

Luxembourg has collected some characteristics for which it obtained a dispensation like the number of parcels (C04), farming systems and practices (C05), the breakdown of dry vegetables (D09c and d), methane recovery systems (I07d), nutrients management (I09), breakdown of goats (J10a and b), other livestock (J19), and subdivisions of the heading "Rural Development" (M01b, d and e).

- **supplementary national variables**

Luxembourg records a number of characteristics on a supplementary basis for national purposes. These are:

- a) different machines and agricultural installations and machinery like fertiliser, manure and slurry spreaders, silos for green fodder, mechanical milking installations, manure disposal installations, refrigerators for milk, automatic dispensers of concentrate, stables and pigsties,
- b) social security data
- c) investment data
- d) data on succession

- **Characteristics defined otherwise: the annual work unit (AWU)**

A person is regarded as being employed full-time on a holding if he works on average eight hours per day for at least 275 days (2 200 hours per year). Persons under 15 and over 80 are not regarded as forming part of the agricultural labour force.

2.2. Questionnaire

- **Type of questionnaire and description**

All the characteristics on land use, livestock population, agricultural installations and machinery, the agricultural labour force, etc. are recorded using a single 12-page questionnaire in paper format. This questionnaire is supplemented by check lists and summary municipal lists for the use of census takers and municipalities to establish totals by municipal section and by municipality.

- **Copy of the questionnaire (attached)**

3. SURVEY METHODOLOGY

3.1. Organisation of the survey

The organisation and responsibilities of the survey are divided between STATEC on the one hand and the 118 municipalities of the Grand Duchy of Luxembourg on the other.

- **STATEC**

STATEC is concerned with the preparation of the survey at methodological, technical and organisational level: the drafting of the questionnaire and the other survey documents, informing municipalities and farmers, sending questionnaires and other documents and also instructions for interviewers to the municipalities, the design of the control programs, the capture and correction of questionnaires, the specification of the tables and drawing up of computer programs for the preparation of these tables, publication of results and establishment of the EUROFARM file.

As the survey on the structure of agricultural holdings in Luxembourg is based on an annual agricultural census which has been carried out since 1953, it was not necessary to train a specific project team. The survey was led by two people who are usually engaged in the national census, both of them with a professional experience spanning more than 10 years at this level. One of these individuals is concerned with the statistical and methodological aspects of the survey and the other with its computer aspect.

- **municipalities**

The municipalities organise and check the survey in the field. They designate and instruct the census takers, see that each holding is recorded, carry out an initial check on questionnaires for calculation errors and any blanks, draw up summaries with sub-totals and totals by municipal section and for the municipality overall and return the questionnaires to STATEC.

Moreover, these municipalities play a very important part in the survey. In fact, there is no single and complete register of agricultural holdings. As a rule, the municipalities designate the same interviewers each year; they live in the territory where they undertake the census and therefore know the number and

the headquarters of the holdings to be questioned. Many municipalities also draw up lists giving the addresses of the holdings questioned the year before and bring them up-to-date as and when changes occur. The 2 814 holdings recorded on 15 May 1999 were distributed over 118 municipalities, so there were 24 holdings per municipality on average. The municipalities and the interviewers are therefore very well acquainted with the farmers in the municipality and this facilitates the obtaining of correctly completed questionnaires or the completion of missing data, for example by statements taken from the Registry Office Register. The 118 municipal secretaries and the 650 or so census takers receive an allowance based on the number of questionnaires processed.

3.2. Work programme

The preparation of the 1999/2000 survey on the structure of agricultural holdings began at the end of January 1999 with the compilation of the questionnaire and other necessary documents (section lists, municipal lists, opinions) and the forms being sent to the printers. Since a number of new characteristics had been introduced, the annual agricultural census questionnaire of 15 May had to be adapted.

The printers supplied the questionnaires and other documents in early April 1999. The municipalities were then informed by a circular of 9 April 1999 of the survey which they had to organise in the field. The questionnaires and other documents were sent to the municipal authorities at the end of April 1999.

The survey in the field was conducted by the municipalities from 15 May to 15 July 1999. After the last questionnaires were received in mid-July, STATEC undertook summary checks and drew up provisional results in the third week of July 1999.

The individual questionnaires were keyed in and processed from 17 August 1999 to 20 January 2000. The work was concluded with the preparation of a file and national tables. The national results were published by a STATEC Bulletin of 8 June 2000.

The Luxembourg codification differs from the Community codification. The drawing up of the table of correspondences which was necessitated by the new characteristics and the changeover to SAS software began in May 2000. In October 2000, STATEC drew up the file with EUROFARM data. An initial sending of data to EUROSTAT by the STADIUM system took place on 15 November 2000, the latter with validation of data by EUROSTAT on 19 December 2000.

3.3. Preparation of the operational phase of the survey

3.3.1. Population and basis

- **Target population, definition of agricultural holding and description of survey thresholds**

The target population is made up of all agricultural, viticultural and horticultural holdings as defined by the Ministerial Regulation of 31 March 1982. It was presented in detail and together with the survey thresholds in point 1.2 above.

The definition of an agricultural holding generally corresponds to that given by Commission Decision No 2000/115/EEC of 24 November 1999. The holding is a production unit managed by a farmer which may be a natural or legal person. Legal persons are understood to be the State, municipalities, associations of municipalities, public establishments and public utility establishments, non-trading and commercial companies, agricultural associations and non-profit associations. Groups of natural persons who have created mergers of holdings have not been taken into account as such but classified under legal persons. Nearly all Luxembourg holdings (90%) are family undertakings made up of a single production unit.

- **Survey basis, sources, reference date and updating of the survey basis, errors**

The survey is carried out according to the lists of holdings held by the 118 municipalities of the Grand Duchy of Luxembourg. The lists are updated by the municipalities as and when changes take place, so as to be complete and reliable as at 15 May, the date of the exhaustive annual survey. STATEC, moreover, checks the taking into account of all holdings by comparison with the questionnaires returned the year before and acquires information among municipalities in cases of doubt. 15 May is the reference date for all data concerning agricultural areas, livestock, agricultural installations and machinery and the family population. The reference period for the data on the volume of work provided is made up of the 12 months preceding 15 May.

These statistical records constitute the sole source of the survey basis. Administrative sources are, however, used to check certain data. Thus the register of the administration of technical services for agriculture on holdings engaging in organic farming according to Council Regulation (EC) No 2092/91 of 24 June 1991, amended by Commission Regulation (EC) No 1488/97 of 29 July 1997, has served to check farmers' responses. This register was ready on 31 December 1999.

Errors due to the survey basis were almost non-existent. Since the census is an exhaustive one, sampling errors or classification errors were not in any event possible. As the holdings were recorded by municipality, there could have been double or multiple counting following confusion between the municipality where the holding had its headquarters and the one where most of its agricultural area lay. The farmers in question obviously refused to respond several times and in doubtful cases the municipalities obtained information from STATEC on the decision to be taken (mergers). In any event, the Ministry of Agriculture identification number ("Kannennummer") was to be

indicated on the questionnaire in order to avoid this kind of problem. The commonest error was the municipalities taking into account holdings not corresponding to the criteria laid down. These questionnaires were eliminated when the capture operations took place at STATEC.

3.3.2. Survey plan

- **counting**

The annual agricultural census of 15 May which served as a basis for the Community survey on the structure of agricultural holdings is exhaustive.

- **co-ordination with other surveys**

There was no specific co-ordination with other surveys. The 15 May survey serves in any event as a survey on bovine animal numbers (May/June) and pig numbers. All the data were collected by statistical questionnaires, with the exception of those on the objective areas or the municipalities in question, [and]¹ relayed to STATEC by the Ministry for Economic Affairs. As for the rest, administrative data were only used to check the classification of holdings under the heading “Organic farming”. The use of administrative data has not yet become customary in the Grand Duchy of Luxembourg and is beset by problems of definition and confidentiality.

3.3.3. Pilot survey

The agricultural survey of 15 May, which serves as a basis for the Community survey on the structure of agricultural holdings, is annual and has the benefit of a long tradition (going back to 1953!). It has not, therefore, been necessary to undertake a pilot survey.

3.3.4. Informing and training staff and respondents

- **training of interviewers and municipal staff**

Municipalities have pools of interviewers to carry out the different missions for which they are responsible (“fiscal” census, labour force survey, census of the population, agricultural census of 15 May). These persons are therefore well accustomed to questioning techniques and questionnaire checks. All the necessary instructions are, moreover, on the municipal lists, the section lists and the questionnaires. Since the census is an annual one, the secretaries and other municipal employees in charge of operations in the field are also familiar with the market to be monitored and can, as appropriate, instruct their successors or train new census takers. In the event of problems, STATEC is obviously at the disposal of the municipal authorities, and indeed of the census takers, to clear up any problems. Special training has not, however, taken place. When there are major changes in the methodology of the survey or in the questionnaire, the municipalities are informed accordingly by circular.

¹ *The structure of the original is unsound, hence this suggested addition – Translator.*

- **informing the respondents**

Farmers are informed of the census by notices posted up on the public highway by the municipalities. These notices contain the same information as those referred to in point 1.2 of this paper.

3.4. Sampling, collection and capture of data

3.4.1. Determination of the sample

The annual agricultural census of 15 May serving as the basis for the 1999/2000 survey on the structure of agricultural holdings is an exhaustive survey and does not therefore require a sample to be determined.

3.4.2. Collection of data

- **organisation of work in the field**

The preparation and management of the survey in the municipalities is the responsibility of the College of Burgomasters and Deputy Burgomasters. To carry out the survey, the municipal authorities appoint interviewers with a good knowledge of the region, the farmers and the way in which the questionnaires are to be completed. They receive blank questionnaires to which the farmers must respond and a check list sent by STATEC at the end of April of the survey year.

The questionnaires are sent out to farmers at the beginning of May and explained to the respondents in a personal interview. Completed questionnaires are collected as from 20 May by interviewers in the field. All the data relating to the characteristics recorded are transcribed by the interviewer on the check list. The census taker then calculates the overall result of each characteristic in his survey district. The check list and the individual questionnaires must be returned to the municipal administration office by 25 May.

The municipal secretary pools the results from the different survey districts into results by section and municipality and transcribes them on the municipal list. All the documents (completed questionnaires, check lists, municipal lists) must be returned by 5 June to STATEC. In the municipalities, all the operations are carried out manually. Some municipalities undertake the distribution of the questionnaires by post while others have entered the municipal lists on Excel files, which are printed out and sent to STATEC.

Once the documents have been received, STATEC keys in the individual questionnaires using BLAISE software. After the data have been validated and the national file has been drawn up, the national tables are drawn up using SPSS software.

3.4.3. Checking of the data

- **at municipality level**

The census takers check for the first time that the questionnaires have been fully and correctly completed when they are collected. The interviewer may directly ask the farmer for clarifications or additional information. When data

are transcribed on the check list, they are checked a second time and, where appropriate, the interviewer again contacts the respondent to correct any errors or omissions.

It is then the turn of the municipal secretary to check manually that the questionnaires have been completed fully and correctly. He also ensures that the data have been correctly transcribed on the check lists. Where appropriate, he completes the questionnaires using the data at his disposal (Registry Office Register) or by a telephone call to the farmer in question.

- **at STATEC level**

After receiving the documents, STATEC undertakes an initial manual verification of the check lists and municipal lists to ascertain any errors of calculation or omission. It is also then that exhaustiveness is checked by comparison with the municipal lists of the year before.

Individual questionnaires are checked at STATEC at the time of encoding using BLAISE software, which enables gaps, errors of plausibility and consistency, arithmetical errors, errors in relationship between the different characteristics, logical errors and contradictory values or characteristics to be detected when the data are captured. At the same time, the checking program prevents any capture errors. It performs 150 or so different tests for the needs of STATEC with a view to drawing up the national results. Apart from the checking by capture software, the senior and experienced staff who carry out encoding record and correct those rare errors which the software cannot find (routing control).

Finally, after the national tables have been drawn up, these are compared both with the provisional results supplied by the municipal lists and with the previous year's tables to check the plausibility of the results.

3.4.4. - Non-response

- **Non-response concept**

Should the gaps in the questionnaires collected by the census takers be fairly numerous, whether inadvertently or by refusals to respond, it is seldom that the incomplete questionnaires are sent back to the municipalities, or indeed to STATEC, since the census takers and the municipal secretaries are required to fill in the gaps.

As for farmers who send in their questionnaires after the time limits or who refuse outright to complete the questionnaire, they are extremely few in number. Luxembourg legislation imposes an obligation as to declaration, failure to comply with which may be penalised by a fine which in 1999 could be as much as LUF 100 000, or €2 500. STATEC receives from the municipalities the names and addresses of the farmers who have refused to respond; they only represent approximately a dozen or so holdings, half of whose data it has been possible to estimate by reference to the year before, as against the 2 814 holdings which have responded.

- **policy on handling non-response**

When a farmer has completed his questionnaire incompletely or when he has refused to complete it, he is initially contacted a second or third time by the interviewer. It is then the municipal administrative office which gets in touch with him to persuade him to supply the missing data. Should it be absolutely necessary, it is STATEC which contacts the farmer to obtain the questionnaire or the figures which have been omitted. Although the obligation to reply and the risks incurred in the event of the non-response are shown on the questionnaire, both the interviewer and the municipal secretary or person in charge at STATEC draw attention to this point if they have not succeeded in persuading the respondent by explaining to him reason for the survey.

3.5. Processing estimation and analysis of data

3.5.1. Method of processing missing or inaccurate data

- **methods of correcting and supplementing data**

Given the fact that both interviewers and the municipalities undertook new discussions with respondents in the event of errors or blanks, the amount of data to be corrected or supplemented was already very small.

These data were processed on the basis of data from the year before, either from the holding in question (categories of agricultural area, type of tenure, number of parcels, categories of different livestock, machinery and installations, labour) or from the results for the whole country by assigning the respective percentages for the type of tenure and the categories of livestock. In the case of the number of parcels, the figure was calculated using a computer program taking account of different parameters, such as the area utilised and the categories of the area. As regards the facilities for the storage of fertilisers, the figures were assigned by taking account of the average area and the head of livestock. In the case of labour data, assignment was based on the area of the holding.

It should, however, be noted that the amount of data obtained by estimation or assignment is very small and did not affect the quality of the results obtained.

- **persons authorised to make corrections, validation of data**

Corrections to, and the validation of, the data were carried out by the person in STATEC in charge of the survey on the structure of agricultural holdings.

3.5.2. Errors of estimation and of sampling

The agricultural census of 15 May which served as a basis for the Community survey on the structure of agricultural holdings was exhaustive. There could not therefore be any estimation or sampling errors.

3.5.3. Errors not due to sampling

- **errors in coverage**

As recorded above, the number of holdings which refused to respond was minimal. Moreover, the municipal secretaries and the interviewers have a

thorough knowledge of the farmers in their region. There were not therefore any coverage problems.

- **errors in measurement**

Errors in measurement were negligible; farmers are in fact afraid to see their replies compared with those they give to obtain aids and subsidies and for this reason do not tend to supply approximate or rounded figures to an unreasonable extent. In the case of agricultural area, the data were even partly expressed in square metres, whereas STATEC only asked for ares. As regards fertilisers, it might be wondered whether farmers sometimes confuse storage capacity and the actual quantity stored. The data on the labour force was partly overestimated, since farmers tend to indicate the volume of work supplied during the periods of intensive work instead of annual averages and not to make a clear-cut distinction between agricultural work and household work in the case of spouses. Similarly, the number of farmers who thought they practised organic farming according to Community rules was markedly overestimated and had to be corrected by reference to the Register of Organic Farming Holdings of the Administration Office for Technical Services for Agriculture.

- **errors in processing**

Given the fact that the data were captured at STATEC using a BLAISE control program, errors in processing ought to be minimal or even non-existent.

- **errors due to non-responses**

The case of errors due to non-responses was examined in detail under point 3.4.4; as the non-response rate was only 0.5%, its impact on the quality of the results was virtually nil.

3.5.4. Assessment of the estimates

The data of the agricultural survey of 15 May which serves as a basis for the Community survey on the structure of agricultural holdings are reliable. On the one hand, the fact that the survey is an annual one allows a comparison between successive years and STATEC has not recorded any break in series which would have been inexplicable in the 1990s. On the other hand, the number of checks and controls repeated at different levels of the census necessarily reduces the number of errors there might be. The use of BLAISE software, in particular, is such as to direct the number of possible errors towards zero. The fear of seeing their responses compared with those supplied for obtaining premiums, subsidies and other aids also causes farmers to respond correctly to STATEC questionnaires.

It is nevertheless difficult to assess the reliability of the data of the agricultural census by comparison with other sources of data. The use of administrative data is only partially possible on account of differences in definitions and methodology and has only been carried out to determine the holdings practising organic farming. The SANITEL system for the identification of bovine animals had not been in operation long enough to allow valid comparisons to be made and posed problems in connection with exports.

Comparisons of agricultural labour data with employment statistics or the general population census are also exposed to definition problems. These sources take into account forestry, which is excluded from the agricultural census. Moreover, they are stricter when it comes to taking family labour into account. In the census, many helpers are found who only work during harvests or for a few hours per day. The fact remains that the 1991 population census recorded 5 461 persons employed in the agricultural sector, whereas the agricultural census of 15 May 1991 recorded 8 374. If we refer to the volume of labour expressed in annual work units (AWUs), which was 5 774 AWUs as at 15 May 1991, the divergence narrows considerably. In the case of employment figures for 1999, we find a similar divergence between 4 700 persons (employment) and 6 402 persons or 4 449 AWUs (census). The difference between the definitions used and the survey fields do not make any conclusion possible as to the reliability of the agricultural census figures. The divergences are due to taking all the work performed into account in the census. This is why the census figures, especially in the form of annual work units, appeared to be adequate to us for a structure survey.

4. PUBLICATION AND DISSEMINATION OF THE RESULTS

Once the section lists and the municipal lists drawn up by the municipal authorities were checked, the provisional results of the 15 May 1999 agricultural census were calculated and published in mid-July 1999.

After the capture and correction of the individual questionnaires, STATEC drew up the national file and its national tables with the definitive results of the census as at mid-February 2000 for the whole country by size class and by technical/economic enterprise as well as by municipality.

These tables were not published in full but placed at the disposal of the organisations (Chamber of Agriculture, peasant associations) and government departments (Ministry of Agriculture) concerned.

The part of the tables with the definitive results intended for the general public was published in the form of a special 36-page brochure (STATEC Bulletin No 4/2000), comprising one part with texts and graphics describing trends since the last census, general retrospective tables, tables by size class of holdings and tables by technical/economic enterprise of the holdings. The appearance of this bulletin on 8 June 2000 was announced to the media (press, radio and television) by the issue of a STATNEWS showing the key figures.

It should be noted that the complete tables by size class, technical/economic enterprise and regional subdivision (cantons and municipalities) are available on request.

Finally, the key results of the census were incorporated in the “Luxembourg Statistical Yearbook” for the year 2000 published in December 2000. This Yearbook is also available on CD-ROM and its tables are accessible in downloadable format on STATEC’s website.

5. SUGGESTIONS CONCERNING FURTHER TASKS

The methodology used by the Grand Duchy of Luxembourg to conduct the annual agricultural census as at 15 May on which the Community survey on the structure of agricultural holdings is based is almost stretched to its limit.

In fact, the growing number of questions on the environment and rural development overload the questionnaire, which has now reached 12 pages. Moreover, farmers are increasingly balking at responding to STATEC surveys because their administrative burdens are constantly on the increase.

It therefore seems that a national register of agricultural, viticultural and horticultural holdings, accompanied by a databank fed with statistical data from STATEC statistics, supplemented as far as possible by existing administrative data, needs to be drawn up. This is to alleviate the administrative burden on farmers and to prevent duplicate, or even multiple, questionnaires.

However, that is a long-drawn-out project since the different authorities are still reluctant to supply each other with data, definitions and categories may differ from one administrative office to another and there is as yet no single identification number within the authorities concerned. The updating of a databank of this kind could, moreover, prove to be slow and difficult and any problems in confidentiality on account of the fairly stringent legislation on personal data protection ought not to be forgotten.

Yet, bearing in mind the advantages in cost terms and in terms of the volume of work both on the respondents' side and on the interviewers' side, such an integration of available sources does, however, seem to be inevitable. This collaboration between authorities could involve, for the STATEC structure survey, the Social Security Department (labour and agricultural population) and the different departments of the Ministry of Agriculture (organic farming, environmental data and data on conservation of the countryside), in particular through the use of Luxembourg's SANITEL system of bovine livestock identification and recording.

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