

Seminar on Registers in Statistics - methodology and quality

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Improving the Quality of EU Farm Registers

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1. Introduction

There is currently no harmonised legal framework for the establishment of farm registers in the EU, although most Member States already have national farm registers in place. These registers contain the basic elements needed to identify farms and to define frames for statistical surveys, but they vary in the amount of information recorded and in the sources and methods used to update them.

This paper provides a summary of a recent review of farm registers undertaken by Eurostat and of the projects under way in Member States. The paper then discusses a common structure, with links to a core set of external sources, which could be used to develop a harmonised format for farm registers in the EU.

2. Eurostat questionnaire on national practices

2.1 Use of farm registers in Member States

In March 2006, Eurostat invited Member States to provide details about their national farm registers, including information on the content, links to other data sources and the methods used to update the register. This section summarises some of the main results of this survey.

The responses indicated that statistical farm registers are in use in 21 Member States and under development in a further three. Although the registers are generally used for selecting samples for agricultural surveys, in some countries the registers are also used for statistical analysis or for administration purposes (e.g. sending out circulars and other information to holdings).

In most cases the register is maintained by the national statistical office, although in a small number of Member States, responsibility rests with another government department such as the Ministry of Agriculture.

2.2 Typical content of farm registers

For most EU countries, a census of agricultural holdings takes place only every 10 years¹. In these countries, farm registers have an important role to play, namely in the provision of statistics from intermediate sample surveys, administrative sources or a mixture of these two. Where registers are in use, however, there are some important differences in their coverage and content when countries are compared.

¹ Council Regulation (EEC) No 571/1988

For example, in most registers, the basic unit is the agricultural holding, defined as *"a single unit, both technically and economically, under single management, which produces agricultural products"*. However, many registers have thresholds that exclude small holdings, such as those generating very little produce for sale. The thresholds are generally based on the size of the land, the numbers of livestock or a combination of these characteristics.

Furthermore, the level of detail held in the register on the land area and livestock of the holding varies from country to country. In some national farm registers the information is very detailed (e.g. relating to individual crop and livestock types) while others contain only summary information (e.g. total utilized agricultural area). Around half of the farm registers contain some form of geo-reference for the holding and a similar proportion contains details on employment levels.

In the countries where there is an annual census of agricultural holdings (e.g. Belgium, the Netherlands and Luxembourg), the need to undertake sample surveys using a national farm register as a sampling frame may be small. However, as countries examine ways to reduce both respondent burden and the costs of statistical surveys, the use of farm registers and sample surveys becomes more and more relevant.

2.3 Links with other registers

Around half of the national farm registers have a link to the national business register in the form of an identification number. Where agricultural holdings are included in the business register, it is generally an incomplete coverage of holdings.

In a number of countries, links have also been established between the farm register and the systems established for the administration and control of Community aid schemes in the agricultural sector (IACS). Because IACS includes a system for the identification of land parcels and the registration of animals, it has the potential to be a source for regularly updating the content of the farm register. However, experiences in Member States indicate that it can be a complex process to create links to the IACS databases.

Member States have also created links to other relevant national registers such as veterinary registers and registers of slaughtered animals. Around half of the Member States have introduced systems to automatically update the farm register using the links to other registers and results from agricultural surveys.

2.4 Difficulties in maintaining the farm register

Maintaining the farm register presents difficulties which are also encountered with registers in other statistical domains. Ensuring the register is up to date requires an infrastructure to be in place that facilitates regular input from surveys or other data sources. Reliable links have to be established and the definitions of the relevant source variables must be consistent with the farm register requirements.

Any data mismatches usually require careful manual examination and can be difficult to resolve quickly if follow-up contact with respondents is needed. A further complication arises when another data source is outside the responsibility of the national statistical office, as it can then be difficult to determine or influence the quality of the information being provided.

3. Current development projects

3.1 TAPAS funding

In an effort to move towards more consistent practices, and to encourage Member States to take advantage of the range of administrative information available in the agricultural sector, Eurostat is currently supporting farm register projects in a number of Member States. These projects are part of the Commission's TAPAS programme², and concern four key areas:

- Linking the farm register to the business register and other administrative sources
- Extending the information contained in the farm register to facilitate the selection of sample surveys
- Improving the quality of existing national farm registers
- Using the farm register for regular statistical reporting

Applications were received from fourteen Member States and the first work began in 2005. Four Member States have already completed their work and all actions are due to be completed by the end of 2008.

3.2 Early findings

With the work completed so far, countries have been able to improve the coverage of their national registers and extend the procedures for validating and updating the information stored in their farm registers. In some cases new variables have been added to the register, using links to external sources.

Although the IACS administration system is a highly relevant administrative data source, linking to it has proved difficult. This is because the IACS records do not necessarily identify the holding, from which applications for Community aid come. Instead, the IACS records may relate to individual applicants or specific herds of animals. Fortunately, the evidence from the projects so far indicates that links to certain IACS databases can be achieved, and it is hoped that the findings in other Member States will corroborate this.

4. A harmonised structure

4.1 Advantages of a harmonised approach

Having a common set of information on the agricultural holdings in national farm registers would open up the possibility of producing regular sets of summary statistics, which would be comparable between Member States and which would reduce the need for frequent censuses or surveys.

Such registers could also hold the key variables needed for selecting very specific samples of agricultural holdings e.g. holdings with certified organic produce.

The current work underway in Member States will be used to formulate recommendations on developing and maintaining national farm registers. In particular, it is hoped that these recommendations will include a common approach to the exploitation of standard administrative sources such as IACS.

² Commission Decisions 2005/197/EC and 2006/127/EC approving the Technical Action Plan for improving Agricultural Statistics (TAPAS)

4.2 Basic structure

A typical structure for a farm register comprises:

- Holding identification codes
- Legal status
- Address of holding
- Economic activities of the holding
- Land area (broken down by arable, permanent pastures, orchards, etc.)
- Livestock (broken down by bovine animals, sheep, goats, pigs, poultry, etc.)
- Labour force
- Administrative details (the holding's involvement in other surveys, date of last update, etc.)

In order to achieve a common structure, which could then be updated from different sources, two important actions are required. First, agreement will need to be reached on a common set of categories to be held on the register, together with their precise definitions. Secondly, a list of identification codes will need to be defined in order to link to an agreed set of data sources.

4.3 Potential links

In addition to the links to data sources established under Community legislation (e.g. IACS, business register etc.), there may be a range of additional national sources which can be exploited to update and validate the farm register (see Figure 1).

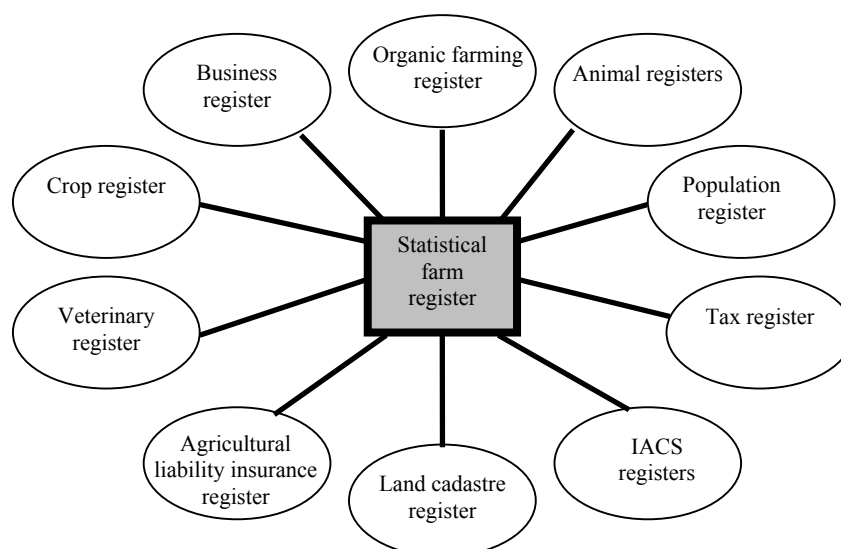


FIGURE 1. Example of possible external data sources

Many of these sources are based on different user requirements, with different record structures, reference periods, incompatible codes and different organisations. In such cases, establishing a link can present considerable difficulties.

Nevertheless, if suitable links can be established, they can help to reduce the overall data collection burden. A further advantage of linking data sources, even if they do not contain data of primary interest, is their potential for providing variables for additional validation and consistency checks to improve data quality.

5. Conclusion

For most Member States, farm registers are a basic requirement for agricultural surveys. Although they often contain information on similar characteristics, the precise definitions and the level of detail can vary significantly between countries. By working with Member States to define guidelines for harmonising farm registers, Eurostat hopes to achieve greater consistency in the design of Community agricultural surveys, greater use of information from other sources and a reduction in the statistical burden on respondents.

In parallel with the current development projects in several Member States, Eurostat therefore plans to launch discussions with Member States over the next year to draft a set of guidelines on the structure and maintenance of national farm registers