

**FARM STRUCTURE SURVEY 2007**

**NATIONAL METHODOLOGICAL REPORT**

CYPRUS

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## **SUMMARY**

The FSS 2007 was carried out in Cyprus based on the relevant Commission regulations, which request member states to conduct farm structure surveys in 2007.

The FSS 2007 aimed at collecting information on the structure and typology of agricultural farms as well as their agricultural activities. This information was collected through a paper questionnaire, which included all the characteristics set out by the commission Regulation EC no. 2139/2004.

The Farm Structure Survey 2007 was a sample survey, which was selected with the method of stratified systematic random sampling for holdings with an SGM of less than 19.200 Euros and with exhaustive coverage of larger farms. The sample was drawn from the farm register, which was prepared based on the census of Agriculture, which was conducted in 2003.

The FSS 2007 was conducted by the Agricultural Statistics section of the Statistical Service of Cyprus and was partly funded by grants of the European Union. Preparatory work commenced in early 2007 and the collection and data entry took place in the last quarter of 2007 and the first quarter of 2008. Data analysis for EUROFARM purposes was done in the period May 2008 to August 2008. Further analysis of the data is envisaged to be completed over the next few months.

The project was organized by a three-member project team under the supervision and guidance of the head of the Agricultural Statistics section of the Statistical Service of Cyprus. A total number of 89 persons worked on the project the majority of whom were casual employees recruited only for the purposes of the project. Most of the casual employees had worked previously in the Farm Structure Survey of 2005 and were, therefore, experienced in this area.

Considerable emphasis was given to coverage aspects of the survey and to the quality of the collected data. This was achieved through the implementation of a multi-stage checking process both for purposes of coverage and for purposes of minimizing errors on the questionnaires. The timing of the checking process, the re-visits for corrections and data entry were also carefully planned in order to minimize the time lag between the visit to the respondent and the re-visit for corrections.

The main results of the survey will be available to the public on the website of the Statistical Service, whereas more analytical results will be published in paper form in 2009.

## **1. INTRODUCTION**

This report aims to lay down the general methodological aspects of the farm structure survey of 2007 (FSS 2007) carried out in Cyprus during the period November 2007 – April 2008. The survey collected data on the structure of agricultural holdings for the reference period of October 1, 2006 – September 30, 2007. For uniformity purposes, the report follows the predetermined structure of all such reports as requested by EUROSTAT.

### **1.1. History, scope**

In the context of national statistical needs, the Statistical Service of Cyprus has been conducting annual Statistical Surveys and censuses at about 10-year intervals since independence in 1960. In 2003, a farm structure census was carried out in the country, which was based, for the first time, on the guidelines and relevant regulations of the EU regarding farm structure surveys. This was considered of utmost importance in the light of the fact that Cyprus was becoming a full member of the EU only a year later. For the purposes of carrying out the census, the Statistical Service of Cyprus (CYSTAT) sought the assistance of the National Statistical Service of Greece (NSSG), which had vast experience in this area. The eager response of the NSSG to the request of CYSTAT for assistance at all stages of the census was very constructive and led to a successful completion of the project. More specifically, colleagues from the NSSG assisted in the preparation of the questionnaire, provided a very valuable software program for data entry purposes and undertook the estimation of the results of the Census both for national and EUROFARM purposes.

The experience accumulated during the cooperation of the SSC with the NSSG proved very valuable in preparing and conducting the farm structure survey of 2005 and 2007. This survey covered about 30% of the total population of agricultural holdings and aimed to collect information on the structure and types of these holdings, based on EU requirements and regulations. National needs were also accounted for although the bulk of these needs are satisfied by the information collected in the context of EU requirements.

Given that the FSS 2007 has now been conducted for a third time in Cyprus, its results will also be useful in examining changes in the structure of agricultural holdings over and above the cross-sectional results of the year of reference.

### **1.2. Legislation**

The legal basis for the conduct of the FSS, as indeed for the conduct of all Statistical Surveys carried out by CYSTAT, is the National Statistics Law of 2000.

The law is very explicit in terms of the obligation of agricultural holders in providing the requested information, whereas, it is equally explicit in terms of the obligation of CYSTAT in

treating all collected information as confidential. Furthermore, the law allows CYSTAT to have access to administrative records and this has proved very useful for cross-checking purposes especially in terms of coverage of the Survey. On the other hand, enumerators signed specific declarations at the central and district judicial offices through which their responsibility to treat all information confidential was confirmed. Finally, enumerators were also issued as special identity card by CYSTAT, which they used during their visits to agricultural holders in order to prove that the survey was officially carried out by CYSTAT.

## **2. CONTENT**

The FSS 2007 questionnaire was drawn up based on the characteristics as these are set by the Commission Regulation (EC) No. 2139/2004. The Commission Regulation (EC) No. 1444/2002 was also used in order to define the characteristics included on the questionnaire. In order to be able to use the data entry software that was provided to CYSTAT by the NSSG for the purposes of the FSS 2005, the questionnaire for the FSS 2007 remained the same as that of 2005, with the addition of some characteristics that had to be collected in the FSS 2007 and the deletion of unnecessary ones. It is noted that these additional characteristics were only very few as the 2005 questionnaire already included most of these characteristics. Thus, by using the revised questionnaire in 2007 all variables in the list of characteristics were covered<sup>1</sup>. The questionnaire is attached to the appendix of this report.

The questionnaire was divided into eight main parts each of which dealt with specific characteristics of the holdings as follows:

(I) General characteristics of the holding

This part of the questionnaire deals with information regarding the identity of the holding and the holder, the situation in which the holding is operating, some special characteristics of the holding and the holder and general characteristics of the land of the holding and its geographical distribution. More specifically, the collected information includes the identification number of the holding (which is unique for every farm), personal details of the holder such as name, address, age, etc, whether the holding is still operating with the same person in charge, the legal status of the holding and general aspects regarding its management, the level of education in agricultural issues of holders or managers of holdings, the basic categories of the total land of holdings, general characteristics of utilized land and the geographical distribution of all the land of the holding. In the latter case, the area of the holding is recorded according to the district, municipality or community in which it is located along with the kind of agricultural activity that takes place in each area. It determines the relationship between the holder's place of residence and the places where the holding's area is located.

(II) Distribution of land by type of production

In this part, information is collected regarding the cultivated area by type of crop. The types of crops are divided into four categories: arable crops, kitchen gardens, permanent grasslands and pastures and permanent crops. All of these categories include details of specific crops all of which correspond to the list of characteristics set out in the relevant regulation.

(III) Systems, practical cultures and remaining environmental elements

This part of the questionnaire collected information on the land irrigated, the way of irrigation, the equipment used for the irrigation, whether the holder is using practical

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<sup>1</sup> The following characteristics are non-existent in Cyprus: fodder roots and brassicas; set aside areas under incentive schemes - converted into wooded areas; other gainful activity: aqua culture; other gainful activity: renewable energy production.

cultures and if yes, in what crop or type of livestock and in how many decares or how many animals. There is also information on the type of subsidies to the holder from the EU or from the government.

(IV) Agricultural machinery, installation and electronic equipment

All information regarding equipment used on the holdings and livestock installations was collected in this section of the questionnaire.

(V) Livestock

In this section, data were collected in relation to animals, poultry and other birds. The collected information regards goats, sheep, bovine, pigs, poultry, rabbits, beehives and various other birds and animals. The data in this section referred to November 1<sup>st</sup>, 2007 in contrast to all the rest of the data in the questionnaire which referred to the period of October 1<sup>st</sup>, 2006 to September 30<sup>th</sup>, 2007.

(VI) Labour force

All employment data were gathered in this part of the questionnaire. The collected information related to employment of household members, to permanent and seasonal employment and to unpaid work.

(VII) Development of agricultural regions

This part of the questionnaire included questions aiming to identify any additional activities of the holdings over and above their normal activities. These activities were in some way linked to the normal operations of the holding, although such relationships might be indirect.

(VIII) Information on the interview

Finally, in the last part, information was collected on the interview, such as the person giving the information, the time-period and date of the interview and some general observations.

Finally, it is noted that only paper questionnaires were used and all information was collected during the period November 2007 – April 2008 through personal interviews.

### **3. SURVEY METHODOLOGY**

#### **3.1. Survey organization**

The organization of the FSS 2007 was undertaken entirely by the section of Agricultural Statistics of CYSTAT. A three-member team was formed in March 2007 comprising three permanent members of the staff of the Agricultural Section under the direct guidance and supervision of the head of the section. Each member was given clear instructions relating to their duties and responsibilities together with a planned time-table which set out the target dates for completing the various tasks. Despite the fact that each member of the team was assigned specific tasks, the team met frequently (at least once a week) in order to brief each other on work progress and to exchange views on problems arising during the work. This proved very useful in achieving homogeneity in respect of the way concepts were understood, in assuring that progress of the work was well-balanced and in continuity of the work as it had become possible for the work of each member to continue even in cases of absence, as supervision of this work could easily be undertaken by the other members of the team.

Specifically, the three members of the team were assigned the following general tasks:

- (I) The first member was assigned the task of preparing the basic and the supplementary questionnaire ensuring an exhaustive coverage of the list of characteristics. The same member was also assigned the task of organizing the data entry.
- (II) The second member of the team was assigned the task of drawing up the sample and of following up closely coverage aspects of the survey.
- (III) The third member of the team was responsible for the collection of the data. In this context he recruited and supervised all the necessary casual personnel and was assisted by district officers of CYSTAT.

The training of the enumerators and area supervisors was undertaken by all three members of the team but the main responsibility was shouldered by the member responsible for the questionnaires and data entry. It is noted that training took place in a multi-stage process. At the first stage, district officers were trained by the team. At the second stage, the district officers were asked to train the area supervisors in the presence and under the guidance of the team. Finally, at a third stage, area supervisors had the responsibility of training the enumerators in the presence and under the guidance of district officers and the team members. In doing so, district officers had attended the training course three times, area supervisors two times and enumerators one time. This ensured a more efficient implementation of the checking process (explained in detail in section 3.4.4 below) since people were hierarchically in a better position to check, correct and direct the work of personnel under their responsibility.



In total 89 people worked in the FSS 2007. The status and responsibilities of these employees are shown below:

project leader	- 1 employee, the head of the Agricultural statistics section
project team	- 3 employees, permanent staff members of the Agricultural Statistics section
district officers	- 2 permanent employees of CYSTAT and 4 casual employees
area supervisors	- 13 casual employees
data collection	- 55 casual employees
district checking units	- 3 casual employees
central checking unit	- 3 casual employees
data entry	- 3 casual employees
data analysis for Eurofarm purposes	- 1 permanent employee, member of the project team and 1 permanent employee of the Data processing unit of CYSTAT
data analysis for other purposes	- 1 permanent employee, member of the project team
farm register updating	- 1 permanent employee, member of the project team and 1 casual employee

### 3.2. Time-table of all work stages

#### (I) March – July 2007

- (a) Preparation of basic and supplementary questionnaires
- (b) Preparation of the data entry process by repeated tests of an existing software. This work was done with the collaboration and assistance of the Data Processing unit of CYSTAT. At this stage all the necessary hardware equipment was also set up in a special room at the central offices of CYSTAT.
- (c) Up-dating and editing of the farm register using administrative information obtained from the Ministry of Agriculture, Natural Resources and the Environment, from the Agricultural Payments Organization and from various other sources.
- (d) Sample selection on the basis of the typology prepared by EUROSTAT

#### (II) August – September 2007

- (a) Preparation and printing of all relevant documents used in the Survey.
- (b) Obtaining and distributing the questionnaires, documents and other stationery materials to district offices.

## (III) November 2007

- (a) District officers were briefed on all administrative matters relating to the conduct of the survey. They were shown and explained all the documents that should be used and were given three copies of the sample of holdings in their district.
- (b) Interviews and recruitment of area supervisors and enumerators. These were done by district officers who were given instructions to give priority to those persons who had worked previously for the census of 2003 and the FSS 2005, whose work had been evaluated in the range of satisfactory to very satisfactory. It is noted that during the census of 2003 about 280 casual employees were recruited. The work of all these employees was evaluated at the end of the census and a final listing of the top 150 employees was prepared. As for the purposes of the FSS 2007 only about half of this number were required, district officers were instructed to approach these people first following strictly their rank on the evaluation list and only after the listing was exhausted should they recruit new, inexperienced, personnel. Fortunately, all employment needs were satisfied by personnel who had previously worked in the census of 2003 and the FSS 2005.
- (c) One week's training of the district officers. Three days were devoted to the questionnaire and two days to administrative procedures that should be followed during the survey. The training was provided by the project team at the central offices of CYSTAT.
- (d) Three days training to area supervisors. Most of the training related to the questionnaire but about one half a day's training was devoted to the explanation of the administrative procedures and documents that they would be using in their work.
- (e) Three days training to enumerators. The training was devoted entirely to the questionnaire and to coverage aspects of the survey.

## (IV) November 2007 – April 2008

- (a) Data collection.
  - (b) Data checking. This was done through a multi-stage process explained in section 3.4.4. below
  - (c) Coverage checking
  - (d) Data entry
- All of the above stages of work were carried out con-currently.

## (V) May – September 2008

- (a) Data analysis for EUROFARM purposes.
- (b) Commencement of data analysis for other purposes.
- (c) Commencement of editing and up-dating of farm register.

### **3.3. Preparing the survey operations**

#### *3.3.1. Population and frame*

The target population consisted of all agricultural holdings recorded in the farm register. The total number of these holdings amounted to 44.770. This population of holdings resulted from the census of 2003, after the deletion of holdings, which are no longer appropriate for several reasons and on the basis of the following definition of an agricultural holding:

“An agricultural – livestock holding is a technical/economical unit under single management that produces agricultural/livestock products. For the purposes of the census, a unit of this type will be considered a holding and will be surveyed only if it has agricultural area equal or greater than 0,5 decares or which has at least one cow or two other large animals or five small animals or 50 head of fowl or 20 beehives.”

For the purposes of the FSS 2007 survey, exactly the same definition was used. For that matter, the definition of a holder remained also the same and reads as follows:

“A holder of an agricultural holding is the natural person (or group of natural persons) or the legal person who is legally and economically responsible for the holding.”

The frame comprised all holdings enumerated in the census and included all the variables of the relevant questionnaire over and above the information regarding the personal characteristics of the holder such as name, address, telephone number, etc.

Despite the fact that the farm register was only recently prepared, information from surveys carried out between 2003, 2005, 2006 and 2007 such as vines, cereals, fruit and livestock surveys, was used in order to edit the farm register. Furthermore, several registers prepared by the Ministry of Agriculture, National Resources and the Environment were also used for the same purpose. It is noted that this editing process resulted only in minor changes in some characteristics of the enlisted holdings but no need arose either for the elimination of any of the listings or for the addition of new ones.

#### *3.3.2. Survey design*

For the purposes of the FSS 2007, the population typology prepared by EUROSTAT was used as the frame from which the sample was drawn. Based on this typology, some types of holdings were exhaustively covered whereas the remaining holdings were selected on the basis of a stratified, systematic random sampling method. More specifically the stratification and sampling procedure was based on the following steps:

- (I) In order to comply with the funding of the Grant Agreement no. 200462102016, the sample size should be relatively large. For this reason, it was decided that the total sample size should be about 13.500 holdings from the total of 44.770 farms.
- (II) At a second stage it was decided to cover exhaustively all those holdings which, according to the typology prepared by EUROSTAT, recorded an SGM of 19.200 Euros or more. By doing so, 3.557 holdings falling in the above range of SGM were exhaustively selected from all types of farms.
- (III) The difference between the initial target of 13.500 and the 3.557 holdings which were selected at the second stage (i.e. 9.943) had to be chosen from the remaining 41.213 holdings. This was done in the following way:

First, the number of holdings within each type of farm was expressed as a percentage to the total number of holdings of all types (excluding in both cases the number of holdings selected during the second stage mentioned above). This led to a percentage distribution of holdings by type of farm which was then applied to the remaining number of the required sample (9.943), thereby resulting in the number of holdings that should be selected from each type of farm.

Given that the number of holdings to be selected from each type of farm was now estimated, the second step was to decide how many holdings should be chosen from each group of SGM's into which holdings were distributed. Holdings with an SGM less than 19.200 Euros were divided into five groups as follows:  $SGM=0$ ,  $0 < SGM < 2.400$ ,  $2400 \leq SGM < 4.800$ ,  $4.800 \leq SGM < 9.600$  and  $9.600 \leq SGM < 19.200$ . The number of holdings falling in each of these groups for each type of farm was expressed as a percentage to the total number of farms of any given type, thereby leading to a percentage distribution of each type of farm in relation to the SGM grouping. This percentage distribution was then applied to the total number of holdings that should be selected from each type of farm. This total number of holdings was the result of the immediately preceding step.

This method ensured that all types of farms would be covered by the survey and that representation in the sample was analogous to the economic importance of the holding as this is expressed by its SGM.

At the end of the process, a sample was drawn comprising 3.557 holdings with an SGM of 19.200 Euros or more which were completely covered and 9.943 holdings with an SGM less than 19.200.

### 3.3.3. Pilot survey

Since the questionnaire had very little changes from the previous one of the FSS 2005, it was decided that no pilot survey needed to be carried out.

### 3.3.4. Informing and training the staff and respondents

A few days prior to the commencement of data collection announcements were made in the local

press regarding the survey and asking agricultural holders to co-operate with enumerators. On the other hand, after the data collection had started, supervisors were instructed to contact the chairman of each local community council a few days prior to visiting any specific community and to explain the purpose of the survey and ask for their assistance in order to ensure smooth cooperation of the community's residents during data collection. This action also ensured that respondents were reminded for the carrying out of the FSS 2007 and this proved useful, especially in those cases where visits to a community were carried out well after the announcements in the press and the commencement of data collection. It is reminded that data collection lasted almost seven months.

Staff training was carried out in three cycles. First, the project team trained the district officers at the central offices of CYSTAT. This training lasted for five days, three of which were devoted to the questionnaire and the remaining two to the documents and other administrative issues regarding the conduct of the Survey. Second, area supervisors were trained for three days. The first day of training took place at the central offices of CYSTAT and was carried out by the district officers with the assistance and guidance of the project team. The remaining two days of training took place at the district offices and were done by the district officers. During these two days, each of the three members of the project team visited district offices and assisted and guided the district officers in training the area supervisors. Finally, during the third cycle of training which also lasted for three days, area supervisors trained enumerators at the district offices in the presence and with the assistance and guidance of the district officers and of a member of the project team.

### **3.4. Sampling, data collection and data entry**

#### *3.4.1. Drawing the sample*

The sample selection took place in two different ways. On the one hand, holdings with a high economic significance were exhaustively covered. These comprised all holdings with a SGM equal or greater than 19.200 Euros. On the other hand, holdings were selected from the remaining population using the method of stratified, systematic random sampling.

#### *3.4.2. Data collection*

Data collection was done exclusively through personal interviews during which paper questionnaires were filled in by enumerators. District officers provided every area supervisor of their district with two sets of the sample of the district. Every area supervisor, in turn, distributed one of these sets to the enumerators each of which was responsible to cover a specific area. The areas distributed to enumerators were mutually exclusive thereby ensuring no overlapping or double visits. The set of the sample distributed to enumerators contained only the name, address and telephone number of the holders whereas enumerators were asked to avoid arranging appointments through the telephone. Thus, the first contact with respondents should be carried out through a personal visit to the respondent's residence and only in the case where the holder could not be found personally should they attempt to get in touch with him through the telephone.

The set of the sample which was kept by area supervisors contained more information than the set distributed to enumerators. Over and above the name, address and telephone number of the holder, this set contained also some information regarding key characteristics of the holding such as the total area of the holding, the total utilized area, total number of animals raised, and some aggregates of employment, machinery, etc. This information was used by area supervisors for checking purposes through the method described in section 3.4.4 of the report below.

During the first week of the collection period, enumerators were asked to deliver the completed questionnaires to their area supervisors on a daily basis. After the first week, completed questionnaires were handed in to the area supervisors at least twice a week. Enumerators were also expected to complete four questionnaires per working day on average, i.e. 20 questionnaires per week.

Area supervisors had the responsibility of checking the questionnaires and handing them in to district officers on a weekly basis, while the latter were held responsible for delivering the questionnaires to the central offices on a monthly basis.

Finally, it is noted that the completion time per questionnaire lied in the range of 50 to 60 minutes, on average.

#### *3.4.3. Utilization of administrative data sources*

No use of administrative data sources was made in the FSS 2007. These, however, are intended to be used at a later stage and after the survey's results are fully analyzed for cross-checking purposes.

#### *3.4.4. Control of the data*

Aspects of data quality and corrections were given considerable attention. For this purpose, a multilevel checking system of questionnaires was set up immediately after data collection commenced.

The first step of this checking process laid in the hands of area supervisors. Area supervisors had at their disposal information regarding key aggregates of the holding such as total land area, total number of animals by kind, employment aggregates etc. Hence, area supervisors were requested to check every questionnaire of all the enumerators under their responsibility utilizing the information they had at their disposal. Thus, over and above the routine checks that they made to the questionnaire, they were obliged to compare the information on the questionnaire against the information that the same holding had reported in the census of 2003 and the FSS 2005. In those cases where aggregates on the questionnaire deviated from the information reported in 2003 and 2005 by more than 10%, area supervisors were obliged to investigate the correctness of the deviation. This, was done either through a second visit to the respondent by the area supervisor accompanied by the enumerator or over the phone depending on the number and extend of such deviations appearing on the questionnaire. This checking method was implemented from the very first week of data collection and this proved useful in two ways. First, enumerators knew

that all their work was thoroughly checked and that there was no room for shallow approaches. Second, any mistakes which were due to any misunderstandings of the concepts by enumerators were identified quite early and re-explained instantly thereby avoiding repetitions.

The second step of the checking process was carried out by district officers. District officers were requested to set up checking units comprising one or two casual employees working under their guidance and supervision. These units had at their disposal more analytical information regarding the characteristics of holdings and were instructed to check samples of questionnaires against this a priori information. Specifically, every checking unit at the level of the district, was requested to check 10% of the total number of questionnaires. They should ensure, however, that this percentage was implemented to the questionnaires of all area supervisors and to the questionnaires completed by every enumerator in each area. In doing so, it was ensured that the work of all enumerators, and consequently of all area supervisors, was checked. In cases where mistakes were found repeatedly on the questionnaires of any specific enumerator, the checking unit was asked to raise the percentage of questionnaires checked with respect to the work of that enumerator. Similarly, the percentage of questionnaires checked was raised in the case that mistakes were frequently found in the questionnaires of any particular area supervisor.

Finally, at a third stage, 5% of all questionnaires received at the central offices were checked against the full list of information of the farm register by a central checking unit, established at the central offices.

The whole checking process had three positive effects on the FSS 2007:

- (I) Mistakes were identified quite early and repetitions of these mistakes were minimized.
- (II) Mistakes which were due to misinterpretations of concepts were also timely identified and re-explained. This improved homogeneity in the understanding of concepts by all people involved in the survey considerably.
- (III) Deviations in the characteristics of holdings in relation to the census of 2003 and the FSS 2005, were either corrected if they were due to errors or explained if they were actually correct.

Finally, checks were carried out during data entry by the software program itself. The program, provided by the NSSG, carried out several checks such as consistency checks, valid value and range checks, arithmetic checks etc.

#### 3.4.5. *Non-response*

In total, 1.016 holdings were not covered from the initial sample of 13.500<sup>2</sup>. The main reasons that the 1.016 cases were not covered are the following:

- (I) Change of holder where new holder was more than 1 = 122 cases
- (II) Farm is no longer active = 109 cases
- (III) Farm is temporarily inactive = 149 cases
- (IV) Farm holder not found = 76 cases

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<sup>2</sup> In 216 cases, it was not possible to contact the respondent.

- (V) Inappropriate farm according to the definition = 130 cases
- (VI) Holder refused to give any information = 82 cases
- (VII) Change of use of the farm = 47 cases
- (VIII) Other reasons = 301 cases

### 3.5. Data processing, analysis and estimation

#### 3.5.1. Methods for handling missing or incorrect data items

Follow-up interviews were carried out during the data collection process in those cases where the checking process suggested that these should be done. After the completion of data collection, however, neither follow-up interviews took place nor imputations were made. It is also noted that the central checking unit mentioned in section 3.4.4 above remained active until the end of the data completion process. Its role was to check and correct any errors that arose during data entry and to obtain answers relating to the missing items. This was done by phone and the need for such corrections was minimal as the checking process described earlier had already taken care of these cases.

Weights were computed based on the actual number of questionnaires completed in each stratum, with the weight of holdings in the strata which were exhaustively selected remaining equal to 1.

#### 3.5.2. Estimation and sampling errors

Data analysis, so far, has been carried out for EUROFARM purposes only. Further analysis and estimation of results will be carried out the next three to six months. The weight of each holding is estimated by:

$$W_{hi} = \frac{N_{hi}}{n_{hi}} \times \frac{N_h}{N_{hi}}$$

where:  $N_h$  is the total number of holdings in the population  
 $N_{hi}$  is the total number of holdings in stratum i and  
 $n_{hi}$  is the number of holdings in the sample selected from stratum i

As non-response was small, no adjustments were deemed necessary in order to account for such cases. Similarly, no new cases were added to the initial sample. Thus, it is noted that the weights of those holdings in the strata which were exhaustively covered are equal to 1, whereas, for the remaining cases, the weight of each holding is proportional to the sample size of the stratum in which the holding belongs.

The standard error for each variable is estimated by:



$$Se = \sqrt{\sum_{i=1}^H N_{hi}(W_{hi} - Q)S_i^2}$$

where:  $N_{hi}$  is the total number of holdings in stratum i  
 $W_{hi}$  is the weight of each holding in stratum i and  
 $S_i^2$  is the variance within stratum i

### 3.5.3. Non sampling errors

Coverage and other non/sampling errors were minimized during the multi-stage checking process that took place con-currently with data collection and data entry. No specific estimates are made for these errors. However, coverage errors are taken into account for purposes of updating the farm register in those cases that the cause of the errors is fully clarified.

### 3.5.4. Evaluation of results

Results will be evaluated after the analysis of the FSS 2007 data is completed. These will be compared and evaluated in comparison to the results of the census of 2003 and the FFS 2005 and in relation to information received from administrative sources.

## **4. PUBLICATION AND DISSEMINATION**

Results are planned to be published in the first half of 2009. The main results will be published on the website of CYSTAT, whereas a paper publication is planned to be produced. The publication will be available for sale from the Government Printing Office. Individual data will in no case become available due to restrictions by the relevant Statistics Law.

**ANNEXES**