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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the experience acquired from the statistical survey on plantations of certain species of fruit trees, carried out by the Member States in 2007 in application of Directive 2001/109/EC of the European Parliament and of the Council of 19 December 2001

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1. Introduction (scope, background, national legislation)

The Commission, in order to perform the tasks conferred upon it in the framework of the Common Agriculture Policy (CAP) and by the European Union (EU) provisions governing the Common Organisation of the Market (CMO) in the fruit and vegetable sector, needs to be kept accurately informed of the production potential of plantations of the main species of fruit trees within the EU and to have available medium-term estimates of production and supply on the markets.

A basic survey carried out every five years on the main orchard species of EU is the method currently used to provide information on some of the factors contributing to the production potential of fruit tree plantations: varieties, age of the plants and the density of the plantations. Some Member States make use of this opportunity to collect data on other factors, such as specialisation of the farm, technical management of the orchard, labour force used, storage and trade, etc.

These surveys have been carried out since 1977. The 2007 basic survey on plantations of certain species of fruit trees was carried out in the 27 EU Member States in application of Directive 2001/109/EC¹ of the European Parliament and of the Council of 19 December 2001 and in accordance with Commission Decision 2002/38/EC of 27 December 2001² setting out the survey parameters and laying down the code and standard rules for the transcription, in machine-readable form, of the data.

In accordance with Article 4(4) of Directive 2001/109/EC, Member States shall send the Commission a methodological report on how the survey was carried out.

The present report on experience acquired during the 2007 survey is submitted in accordance with Article 7 of Directive 2001/109/EC. It is based on the experience of the Commission services, and in particular on the use of the data provided, and the comments and experience set out by the Member States in the methodological report (Art. 4(4) of Directive 2001/109/EC).

Under the terms of Article 4 of Directive No 2001/109/EC Member States are required to notify the Commission of the results of the basic survey before 1 October of the year following the reference year. The dates are presented in Annex 1 to this report (see Commission Staff Working Document).

OJ L 13, 16.1.2002, p. 21.

OJ L 16, 18.1.2002, p. 35.

The data from all Member States were transmitted in accordance with the rules and technical parameters set out in Commission Decision 2002/38/EC.

2. COVERAGE AND CONTENT

2.1. Species surveyed (from EU legislation and others)

In the 2007 basic survey, the species surveyed in each Member State followed the requirements established in the Annex to Directive 2001/109/EC, and were presented in Commission Decision 2008/690/EC of 4 August 2008³. They are also mentioned in Annex 2 to this report (see Commission Staff Working Document). Data on plantations producing apples and/or pears for uses other than dessert fruit were sent on an optional basis by Bulgaria, Germany, Ireland and Spain.

2.2. Holdings (minimum threshold of holdings and/or orchards)

According to Article 1(3) of Directive 2001/109/EC, "the survey shall apply to all holdings with an area planted with fruit trees, provided that the fruit produced is entirely or mainly intended for the market". In practice, the situation differs from one Member State to another, ranging from no threshold (i.e. all holdings are surveyed) to a threshold established at Member State level (for example 15 are in CZ, 50 in FR and 100 in LV). Furthermore, some Member States have changed their threshold from one survey to another.

3. Type of survey, organisation of the survey and time schedule (reference date)

A table summarizing the national survey methods is included in Annex 3 to this report (see Commission Staff Working Document). Methodologically, the most relevant characteristic of the 2007 survey is that it consisted of:

- (a) A comprehensive list in the Czech Republic, Denmark, Germany, Ireland, Latvia, Lithuania, the Netherlands, Austria, Slovenia, Slovakia, Finland, Sweden and the United Kingdom.
- (b) An area frame sampling in Spain, and
- (c) A farm sample survey in the other Member States.

Some Member States made some specific remarks on the survey, the manner and the conditions in which it has been developed and the results obtained. Some of these remarks are summarised in the following table.

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OJ L 225, 23.8.2008, p. 14.

CZThe survey was organized for the first time in the Czech Republic in 2007. Although similar surveys, entitled "Census of fruit trees and bushes", had been organized in the past, the last such survey took place in 1980. Since then, the Czech Statistical Office has collected basic data on fruit production as part of the "Final crop production survey" and "Farm Structure Survey" (hereinafter FSS). The Orchard Survey which is the first one of its kind provides detailed information on the planting of fruit trees in the Czech Republic. EE The 2007 Survey on the Plantations of Fruit Trees was the first of its kind to be carried out in Estonia. It was conducted in conjunction with the 2007 Farm Structure Survey. The survey characteristics were added to the FSS 2007 questionnaires as a separate section. No difficulties in the conducting of the survey were mentioned. Most of the varieties are local. ΙE A significant amount of additional information, for national purposes only, was collected. This included: Whether the grower was a participant in a quality assurance scheme (a) (b) Whether the grower was a member of a producer organisation Details of the numbers of employees (c) (d) Details of the production facilities and harvesting techniques (e) Details of typical yields and value of yields (f) Details of the grower's market outlets Details of the grower's future development plans (g) (h) Details of organic apple production yields and value IT The orchard survey has been carried out in Italy since 1977 and it represents an important point of reference for the fruit tree sector. The orchard surveys were carried out at five-yearly intervals between 1977 and 2007. The aim of the survey is to collect detailed information on the areas of the main holdings with fruit trees and the relative productive potential, in order to orientate the market. In addition to responding to the EU (Directive 2001/109/EC), the survey provides data for use in estimating the national accounts. Moreover, it provides information on the structure and production of the holdings and on the impact of the policy on the sector; it also enables the list of agricultural holdings to be updated. GR The orchard survey includes all the agricultural holdings in which one or more of the eight species of fruit trees that were mentioned are cultivated in regular groves. Regular groves are areas under trees, which are planted in a particular arrangement, and constituting compact groves with a proportional number of trees per stremma, depending on the system of plantation that is used (thin planting, dense planting, e.g. PALMETA in the apples and pears, etc). Regular groves are divided into UNMIXED and MIXED regular groves.

Unmixed regular groves are those that are planted with only one of the species of fruit trees, e.g. only peach trees or only apple trees, and so on.

Mixed regular groves are regular groves that are planted with more than one specie of trees together, e.g. orange trees with olives, or pear trees with apple trees, or peach trees with cherry trees etc, and the trees of the one type of species are found between the trees of the other types in some ordered and not completely random arrangement. Also, the specie with the fewer trees should cover at least 1/10 of the *stremma*. If the trees of this specie do not cover 1/10 of the *stremma*, they are considered to be scattered, even if they are found in a regular arrangement. For a mixed grove to be characterized as regular, what is important is not that the trees in the grove are all of the same family, but that the trees of various species constitute a compact regular grove.

- ES The type of survey is a territorial area frame survey (MAST *Marco de Áreas y Segmentos Territoriales*), which has been used in Spain since the beginning of the 1990s. The surveyors belong to a company that manages the field work of the Spanish agrarian insurance system and they work on a yearly basis on the MAST survey.
- FR The survey makes it possible to better identify and describe the factors that influence the production potential of the orchards, such as variety, age, plantation densities, etc. These characteristics are essential in order to make proper forecasts (volume and time schedule of production).

The questionnaire also includes three further groups of questions in addition to those required by the EU:

- 1. A knowledge of the marketed volumes of production and of the principal sale circuits used by the fruit producers was another objective of the survey. However, this is only a partial study of the fruit marketing circuit at the stage of the initial setting up in the market, and not of the total activity of those involved in marketing.
- 2. Additional information on the cultivation of the orchards.
- 3. To collect information on the permanent labour force and on the seasonal or occasional labour force used by the fruit growing holdings.

The main goals of the survey are therefore to have data on the following points:

- the production structures: location, size, specialisation of uses, land use;
- the permanent and seasonal labour force;
- the storage capacity for fruit;
- the cultivation methods as regards irrigation, protection against weather conditions such as frost, the specifications implemented for the different species;
- the area, density and age of the plantation, the surveyed production potential by variety of each specie;
- the production and the distribution chains from the holding (first placing on the market) by specie;
- the main agriculture practices for maintenance of the orchard.

HU | As in 2001, cadastre maps of the sampled municipalities helped the enumerators to

identify each orchard during the field survey. Additionally, orthophotos (provided by the Institute of Geodesy, Cartography and Remote Sensing) were available for municipalities having at least five orchards. These orthophotos made it possible the correctly identify and distinguish each orchard based on the indication of the limits between them.

In order to identify the varieties, a handbook containing their description together with colour photographs/pictures was provided to the enumerators. The description comprises, among others, the features of the fruit, the ripening period, the shape of the tree and its growing characteristics. All of this information contributed to the professional and qualitative identification of the varieties.

The questionnaires were pre-printed with data in 2007.

- All the data surveyed in 2001 were included on the 2007 questionnaire. Only the abovementioned codes were used for recording on the questionnaire. Only those data-cells where there were changes compared to the previous information had to be completed. The form had a special column for entering changes. Where the data were the same for both years, the data-cell in the special column had to be left blank.
- In the case of the orchards planted after 2001, only certain information was available from the MARD-CAO, namely the identification number of the plantation, the gross area, the code of the species and the holder's data. Only these data were able to be pre-printed on the questionnaires. Obviously, all other information had to be completed on the form; only updating of the pre-printed data was possible, as the data had changed since the time of planting.

During the implementation phase (field survey) the presence of the holder was not necessary. Nevertheless, in the case of certain items, such as varieties in the orchard, estimated grubbing year, etc., the holders might have been able to provide more reliable information. To this end the enumerators contacted the holder in many cases and they completed the forms together. This latter approach also made it possible to update the data on the holder.

Estimated area of the plantations under apple, pear, peach and apricot trees, 2007

Fruit species	Estimated area (ha)	Variance, %
Apple	34 906	0.9824
Pear	2 878	0.5267
Peach	5 787	1.5462
Apricot	5 216	1.3635

The aggregated county, regional and national level data were compared to those of the annual statistics on fruit production and of the previous years.

MT The data were collected using the FSS, as Malta only needed to collect the total area under peach trees.

PL The first orchard survey in Poland was conducted in 1998, and the second in 2004. Both surveys were carried out to meet national needs, but in most cases they followed the EU methodology. They were similar to the current 2007 survey on plantations of certain species of fruit trees, but the results were not transmitted to Eurostat, as Poland was not required to transmit these data. In 2007, the third

orchard survey according to EU requirements was conducted, and in April 2008 the results were forwarded to Eurostat. The survey satisfied not only Eurostat's needs, but also national needs.

The main aim of the last survey (in 2007) was to obtain data on dessert apples and dessert pears by net area, variety, age of the trees and density of the plantation, as well as data on peaches and apricots by net area. The scope of the survey was extended to include characteristics for the needs of national users, namely other species of fruit trees and bushes and berry plantations. Some information about the holder and holding was also the included in the survey.

The survey considered only the holdings which produce fruit that is entirely or mainly intended for the market.

Additional characteristics were collected for national needs only. These included the area and number of fruit trees by age classes and production of fruit for the following species: plum trees, sour and sweet cherry trees, apricot trees, peach trees and walnut trees, and also apple trees by type of rootstock (dwarf, semi-dwarf and hard-growing).

Area and number of fruit bushes and area of berry plantations - for national purposes – for the following species: Hazel, Gooseberry, Redcurrant (colourful), Blackcurrant, Raspberry, Strawberry, Garden strawberry, Chokeberry, Blueberry, Grapevine and Other fruit bushes and berry plants.

As environmental concerns are becoming an increasingly important issue at national and European level, Portugal included some specific characteristics in the questionnaire. These included contributing to sustainable agriculture and some questions concerning environmental behaviour, in particular by identifying a set of growing practices used in the production of the fruit, related to soil management and the protection of the crops. The irrigated area, the level/nature of production, the production system and some production techniques have been surveyed.

Because users have a considerable interest in knowing how the fruit is sent to the market, a question on the way in which the production is marketed was also included.

Pursuant to Council Directive 2006/110/EC Romania was granted a derogation from reporting data for: species, age group and density of plantations. Bearing this derogation in mind and taking into account the national requirements, as part of the abovementioned survey data have been collected on the following: area of young and in bearing plantations, area of plantations on the wane, area newly planted in 2007, area of cleared plantations, productivity and total production for the following trees species: apples, pears, apricots, sweet cherries and cherries, plums, peaches, walnuts, other trees (hazelnuts, chestnuts, quinces). As an experiment, data were collected on the density of the in bearing plantations and those on the wane, and on the density of young plantations. These data were collected as part of the annual survey on plant production for the main crops, for which the National Statistical Institute was responsible.

The survey on plant production for the main crops is based on a sample of 80,000 agricultural holdings, representing the development regions level (NUTS 2) and county level (NUTS 3).

FI In Finland these data can be reliably obtained using a range of different sources, as all sources use the same identification numbers. Published statistics can be regarded as reliable, as they are primarily based on full-sample register data. Telephone interviews helped to boost the response rate.

Most of the data for the Apple Orchard Statistics were obtained from the Integrated Administration and Control System (IACS) registers of the Finnish Agency for Rural Affairs. Municipal rural business authorities enter most of these data from the subsidy forms returned by farmers registered in their municipality. The Act on the Rural Business Register (1515/1994) requires municipal authorities to keep the data in this register confidential. Tike (the Finish Agricultural Statistical Service) maintains the Rural Business Register, and has the right to use administrative registers for the production of statistics.

When estimating potential production volume, estimates based on the number of trees are more precise than those based on acreage. Farmers also find it easier to categorise the number, variety and age of their trees than to categorise acreage or planting density.

On the basis of the 2002 statistics and conversations with the industry interest group, it was decided to request information on variety (and on acreage) for commercially significant varieties only. The variety list for the 2007 survey was drawn up on the basis of the most significant varieties in 2002 (22 varieties). Two new varieties (Rubinola and Rajka) were also added, as they were seen as being increasingly significant. Due to its northern latitude, Finland's apple varieties differ substantially from those grown in continental Europe, and many of the varieties grown in Finland are no longer significant for commercial agriculture

SE The final deadline for the survey was set at 26 March. By that date, 76% of the holdings had replied to the survey. The statistics division of the Swedish Board of Agriculture considers this result unsatisfactory. Discussions about how to increase the response rate in the future have been initiated.

The frame of the Survey on Plantation of Certain Fruit Trees is represented by holdings which, according to the Statistical Farm Register (LBR), cultivate apple and/or pear trees, and also holdings which, according to IACS, applied for subsidies for fruit cultivation of a minimum of 0.25 hectares in 2007. The target population for the survey were the holdings with plantations of apples and/or pear trees of a minimum of 0.25 hectares. All in all, the frame population of the 2007 survey consisted of 369 holdings.

Based on comments made by the holdings, either via the questionnaire or by phone, it can be concluded that the questionnaire was considered difficult to answer. The possibility of simplifying the survey was therefore discussed towards the end of the survey period. A suggestion was made in the Swedish Board of Agriculture that, in future, Sweden ought to be exempted from the requirement to survey pears due to the small quantities of pears grown in Sweden.

4. SURVEY CHARACTERISTICS

4.1. Orchard area considered

In general, the net area of the regular orchard should be considered. However, some Member States took the gross area. In a very few cases, at least some dispersed trees were also included.

4.2. Varieties surveyed (from EU legislation and other legislation)

An analysis of the proportion of the individual varieties within a given species reveals considerable developments linked to changes in consumer preferences.

All Member States provided data on each variety that represented more than 3% of the area of the species.

4.3. Age

For all Member States, the age of trees was calculated from the time of their planting in the orchard (autumn or spring).

4.4. Density

For most Member States, the density of plantation was calculated based on the area planted and for some Member States, such as Bulgaria, Germany, Spain, France, Austria and Poland, density was calculated on the basis of the number of trees per hectare.

4.5. Other characteristics

Some Member States collected data on other characteristics. For example France and Austria collected data on the organic production and marketing network. The data collected by France included data on soil work, fertilisation, plant protection practices, age of the holder, total size of the holding and specialisation, Poland on berries and cherries, etc..

5. DATA COLLECTION AND DATA PROCESSING (CONTROL OF THE DATA)

The results of the survey received in Eurostat were uploaded into a production database, where they were validated before being uploaded in the dissemination database.

6. USE OF THE DATA (DATA DISSEMINATION)

The results of the 2007 survey, as for the previous 2002 survey, are available free of charge through Eurostat's dissemination database for all users having an Internet access.

7. MAIN FINDINGS: ANALISYS OF THE RESULTS

Some summary results of the 2007 survey are presented in Annex 4 (see Commission Staff Working Document). The analysis excludes cooking apples and pear, as the areas under this species are not significant. On a specie basis, the most important findings can be summarised as follows:

80% of the EU-27 orchard area occupied by the species surveyed was concentrated in Spain, Italy, Poland, Greece and France. Apple trees are the most common fruit trees cultivated in EU-27, covering around one third of the surveyed area. Citrus trees (orange, lemon and small citrus fruit) together cover another third of the EU-27 area.

The enlargements to EU-27 produced a substantial increase in the area under table apples and a smaller increase in the other areas surveyed. The area under apple trees increased more than 2.4 times, mainly due to the addition of the Polish⁴ and Romanian apple orchards. Pear and peach tree areas increased by 17% and 13% respectively. The 27% increase of the apricot area was more significant. For citrus fruits, the increase in area due to the last two enlargements is not significant (around 1%).

In EU-27, the main growers of apple trees are Poland (165,715 ha), Romania (60,494 ha), Italy (55,225 ha) and France (40,113 ha). The total EU-15 area of apple tree orchards decreased by 11% between the two surveys. The area in Italy showed a slight increase, while the area in France decreased by 16%.

The largest areas of pear tree orchards in EU-27 are found in Italy (32,075 ha), Spain (25,845 ha), Portugal (9,228 ha) and Belgium (7,225 ha). The total EU-15 area under pear trees decreased by almost 13% during the period 2002-2007.

In EU-27, the largest areas under peach trees are in Spain (75,118 ha), Italy (63,754 ha), Greece (34,127 ha) and France (14,308 ha). Spain and Italy together account for two thirds of the total EU-27 area. Spain is the only EU-15 Member State where the peach tree orchard area increased; as a result, the total EU-15 area under peach trees declined by around 6%.

The largest area of apricot tree orchards is found in Spain (18,700 ha), followed by Italy (15, 649 ha), France (13,804 ha) and Hungary (4,999 ha). Spain and Italy have more than half of the total EU-27 area under apricot tree orchards. The total area in Italy stayed almost constant, and decreased in all other Member States, with the exception of the significant increase (by 26%) experienced by Austria.

Spain has around 55% of the EU-27 area of orange tree orchards (158,824 ha). The area of 73,786 ha in Italy represents one quarter of the entire EU-27 area. The other Member States where orange orchards are surveyed are Greece, Portugal, Cyprus and France, which together account for only 20% of the orange tree orchards in EU-27. The total EU-15 orange tree orchard area increased by 10% between 2002 and 2007, due to the increases in Spain and Portugal. The other Member States experienced small decreases in the orange orchard areas.

The 39,859 ha of lemon tree orchards in Spain represent more than 60% of the EU-27 area. The second largest area of lemon tree orchards (16,634 ha) belongs to Italy, which accounts for around one quarter of the EU-27 area. The third largest area is in Greece (8%). The areas in Cyprus, Portugal and France make up only a very small share of the EU-27 area (around 1% or less in each Member State). As only the area in Portugal increased, while all the other areas decreased, the overall impact in EU-15 was a decrease in the total area under lemon trees.

A large part of this area produces apples that are processed and so includes not only "dessert apples" as requested in Directive 2001/109. This is due to the impossibility of distinguishing between those areas planted for dessert and those areas planted for processing in Poland.

Spain has 116,225 ha under small citrus fruit trees, which accounts for three quarters of the EU-27 area of small citrus fruit tree orchard. The next largest grower is Italy with only 21,998 ha, which represents around 15% of the total EU-27 area. The area increased in Spain and Greece, and decreased in Italy by approximately the same amount. As a result, the small citrus fruit orchard area remained more or less constant overall.

Between 1997 and 2002 the EU-15 orchard area declined by approximately 187,700 ha (15% in relative terms). This decline was particularly noticeable in the case of apple and peach trees (both in absolute values and in relation to the total area under these species). There was an increase, on the other hand, in small-fruited citrus trees (resulting mainly from a significant increase in Spain). With the exception of Finland, areas under fruit trees decreased in all Member States. This downward trend also continued between 2002 and 2007.

The total surveyed orchard area in EU-15 declined by 37,621 ha (4% in relative terms) between 2002 and 2007. The area under orange trees increased by 10%, and the area under small citrus fruit stayed approximately constant. The rest of the fruit tree areas experienced declines of between 5% and 13%. On a Member State (EU 15) basis, the most important findings can be summarised as follows:

In some Member States, the total surveyed area increased. The total surveyed orchard area increased in Denmark (by 6%), Austria (by 4%) and Spain (by 3%). In Denmark, all the areas surveyed (apple and pear trees) increased. In Austria, the peach tree orchard area decreased by one quarter, while all the other areas surveyed saw an increase. There was also a sizeable increase in the apricot orchard area (26%). In Spain, there was a significant increase in the area under orange trees (21%), and a less important increase in the areas under peach tees and small citrus fruit trees. The other surveyed areas declines, and the decline was especially significant in the area under apple trees (a decrease of one third).

Some other Member States experienced a decrease in the total surveyed area, as well as a decline for all of the species of fruit tree surveyed. The total area declined quite significantly in France, Finland, Sweden and the United Kingdom (by between 15 and 20%), while in Luxembourg the plantations of fruit trees producing for the market disappeared almost entirely. In Germany and Ireland, there was only a very small decrease (of less than 1%) in the total surveyed area.

In the remaining Member States, the total orchard area occupied by the surveyed species decreased, although there was an increase for some of the species surveyed. In Greece, for example, the area under small citrus fruit trees increased by one third, whereas all the other areas decreased. In Italy the total area decreased by 8%. It experienced a slight increase in the apple and apricot orchard areas, and declines in the other types of orchard areas. The fall was quite large in the areas under small citrus fruit trees (22%), pear trees (17%) and peach trees (13%). Portugal experienced a large increase in the area under lemon trees, while all other areas decreased, some of them substantially (peach and apricot). In Belgium and Netherlands, the total area decreased by around 4%, due to the combined effect of the decrease in the apple tree orchard area and the increase in the pear tree orchard area.

8. CONCLUSIONS AND RECOMMENDATIONS

Compared with the former surveys, the progress made since 2002 regarding "the area of orchard considered" is to be noticed. Again almost all Member States sent the 2007 survey results in terms of net orchard area ("net area" means surface solely occupied by trees).

With the improvements mentioned above, particularly in relation to the common use of the concept of net areas, the 2007 survey can be considered satisfactory in overall terms. With regard to future surveys, consideration should be given to updating the list of varieties and codes, and to harmonising the thresholds. The identification of synergies with other statistical operations and/or use of administrative sources should be explored.

Summarising the considerations presented in the national reports from the Member States, the Commission can conclude that the Member States experienced no major difficulties in carrying out the survey. This survey provides a reliable estimate of the EU orchard for the seven species under consideration (and even more in some Member States) in the EU legislation.

In addition, it can be said that most of the Member States consider the survey to be very useful, in that it provides not only information on a very important agricultural sector, but also information that is very useful for other statistical purposes, such as agricultural accounts.