

COMMISSION OF THE EUROPEAN COMMUNITIES

COM (76) 2 final.

Brussels, 16 January 1976.

- Report on experience acquired during the first surveys carried out by the Member States in order to determine the production potential of plantations of certain types of fruit trees
- submitted by the Commission to the Council in conformity with Article 8 of the Council Directive of 26 July 1971 (71/286/EEC) as amended by Article 2 of the Council Directive of 10 April 1974 (74/195/EEC).

I. INTRODUCTION

1. The Directive adopted by the Council on 26 July 1971 (71/286/EEC)¹⁾ requires in Article 8 that :

"The Commission shall submit to the Council, by 1 January 1976²⁾, a report on experience acquired during the first surveys; the Commission shall also provide the Council, from 1 January 1977²⁾, with annual reports on the subject of Articles 5 and 6. The Commission shall, where appropriate, submit proposals to the Council with a view to the harmonisation of the methods used by the Member States. The Council shall act on these proposals in accordance with the voting procedure laid down in Article 43 (2) of the Treaty".

2. In accordance with this provision, the Commission submits to the Council this report on the effectiveness of the Directive in permitting medium term forecasts of the production potential of certain species of fruit orchards to be made. The report describes experience acquired during the first survey and draws therefrom certain conclusions for harmonisation of the methods used by the Member States for the organisation of the survey. Necessary minor changes in technical detail to the surveys may in the future be appropriate under a simpler procedure involving consideration and decision by the Standing Committee for Agricultural Statistics³⁾.

II. OBJECTIVES

3. The objective of the Directive is to provide the Commission with information on the production potential of certain species of fruit trees (dessert apples, dessert pears, peaches and oranges), together with medium term estimation of production and market supply which are necessary to perform the task conferred upon the Commission concerning the common organisation of the market in fruit and vegetables. To achieve this objective, the Directive provides for the following statistical surveys and estimates to be undertaken:

- A) quinquennial surveys on plantations of fruit trees
- B) annual estimates of areas of fruit trees cleared
- C) annual details of areas of new plantations of fruit trees

4. All the Member States of the Community as originally constituted have conducted their first quinquennial survey, the most recent national survey being undertaken in June 1974. The Commission has not yet received notification from all Member States of areas of clearings and on new plantations and will report annually in more detail on these notifications from 1 January 1977 as required under Article 8. This report will concentrate on the experience acquired during the first surveys on plantations.

1) O.J. N° L 179, 9.8.1971, p. 21.

2) Dates amended by the Council Directive of 10 April 1974 (74/195/EEC); see O.J. N° L 101, 11.4.1974, p. 66.

3) The Standing Committee for Agricultural Statistics was set up later, by Council Decision of 31 July 1972 (72/279/EEC) see O.J. N° L 179, 7.8.1972, p. 1.

III. THE RESULTS OF THE SURVEYS

5. The Member States have published in full the results of their own surveys on plantations and the Statistical Office of the European Communities has published the results at Community level in summarised version in the Internal Information on Agriculture "Crop Production" series N° 2 of 1975 : Community survey on fruit tree plantations (June 1975). A methodological report on the survey methods and forecasting model will be published in 1976 together with the survey results in more detail (including the results from the new survey conducted in France 1974).

6. Thus the Commission, the responsible authorities in the Member States, the professional organisations and all interested persons now have available more and much improved information by comparison with the position prior to 1971, when only certain of the Member States had conducted national surveys of fruit tree plantations and not on a uniform basis.

IV. THE AGRICULTURAL STATISTICS COMMITTEE

7. The "Vegetable Products" Working Party of the Agricultural Statistics Committee of the Statistical Office of the European Communities has discussed the results in a series of bilateral meetings between the Commission and the Member States from 1971 to 1974 concerning the collection of data. Thereafter in 1975 multilateral meetings of the Working Party have been held in order to study

"in consultation and standing collaboration with Member States the results supplied in accordance with the Directive, the technical problems raised, in particular by preparing and carrying out the surveys and the notifications referred to in the Directive, and the significance of the findings of the surveys and notifications....."

in conformity with Article 7 of the Directive.

8. The Working Party has examined in detail the methods followed in individual Member States, evaluated the problems encountered and with this experience have discussed improvements for future surveys. The situation in the three new Member States has also been discussed in the context of the first application there of the Directive for the next survey in 1977.

V. EXPERIENCE ACQUIRED

A detailed account is given below of the experience acquired together with proposals for improvements in the application of the Directive.

A. surveys on plantations of fruit trees

a) Date of survey (Article 1, paragraph 1 and 4)

9. The Directive required surveys to be carried out in 1972, except where any Member States had carried out surveys during the two years preceding the entry into force of the Directive i.e. a time span of three years. Surveys in France, Netherlands and Belgium were executed in 1969/70, 1971, and 1970 respectively (Belgium conducting a supplementary survey on density classes and for updating purposes in 1972). The surveys in Germany, Luxembourg and Italy were carried out in 1972, 1973 and 1974 respectively, the latter having recourse to the provisions of Article 1 of the amending Directive (74/195/EEC) specifying execution "by 30 June 1974". The first surveys, spread over nearly 5 years, did not provide the "synchronised observation" as originally envisaged in the preamble to the Directive.

10. However had all the surveys been conducted in the Spring of 1972, the results could have been seriously affected by the clearings undertaken in pursuance of Regulation EEC/2517/69 to which further reference is made below. In 1974 France and Netherlands undertook new surveys recording the situation subsequent to such clearing policy which terminated in April 1973. In consequence, results will shortly be available which are both updated and cover a much shorter overall time span, being synchronised in respect of much of the total orchard area of the Community as originally constituted 4).

11. The time of year was not specified for the first survey in 1972 but the "Spring" was specified for subsequent surveys. This is the ideal reference date for surveys since it permits optimum coverage of seasonal changes due to postharvest clearings and autumn/winter plantings. A date in midwinter may introduce risks of incomplete coverage of the newest plantations. The operational date for carrying out the field survey differed in Germany for reasons of administrative convenience, and in France because of the survey method used. France, in order to employ the most up-to-date sampling frame (in the absence of an annual census) carried out during the winter a sample survey of those fields recorded under orchard during the national land utilisation survey which is held during the summer. Member States with a system of annual agricultural censuses in Spring are able to use this census as a basis for their fruit plantation surveys.

4) The surveys undertaken by Netherlands, Italy and France in 1974 covered 462 000 ha, i.e. 91,4 % of the total area under the four species within the original Six Member States.

b) Scope of survey (Article 1, paragraph 2)

12. The Directive specified

"all undertakings having an area planted with the species of fruit trees referred to in paragraph 1 provided that the area covers at least 1500 square metres and that the fruit produced are entirely or mainly intended for sale".

In the Federal Republic of Germany, holdings with at least 1000 square metres under orchard fruit have been surveyed, and in the Netherlands holdings with at least 10 SBEs (standard farming units). In France, where the basic unit of enumeration was the field and not the holding (except for orange orchards), the results supplied referred to orchards with an area equal to or greater than 10 ares belonging to agricultural holdings provided that the production therefrom was sold. However the survey covered the total area under orchard. The new survey conducted in 1974 has revealed that the family gardens (whether or not belonging to an agricultural holding) contain appreciable areas planted with apples trees (28% of the total), pear trees (17%) as well as with peach trees, the latter to a smaller extent (6%). The position is believed to be similar for apple trees in the United Kingdom and even more important in Germany. However, since the greater part of these areas belongs to private gardens which do not regularly produce for sale, it is not recommended that they be brought within the scope of the Directive.

c) Complete enumeration or sample survey (Article 1, paragraph 3)

13. A sample of holdings was undertaken by Italy, by France (in respect of oranges) and by Belgium (for updating and for density of plantation information), whilst the main species of fruit trees in France were surveyed by complete enumeration in respect of the so-called "Exceptionnal Orchards" (important in terms of size or local specialisation on a specific production) and by random sample of fields in respect of all other orchards. Complete enumeration was carried out in the other Member States.

14. In future surveys, more use of sampling may be envisaged, especially on the smaller holdings with below 0,5ha. of orchards, which together contribute relatively little to the total area.

d) Characteristics to be noted (Article 2, paragraph 1)

15. The main varieties, the age, the density of plantings were characteristics required under the Directive and these were satisfactorily recorded. In the case of irrigation, since this is not regularly practised in four Member States (Germany,

Belgium, Luxembourg and Netherlands), the question was not included in the questionnaires. In France and Italy it was found difficult properly to define "the regular use of irrigation"; the survey results failed to indicate the anticipated trend towards a greater percentage of irrigation for orchards of productive age or of higher density⁵⁾.

16. By contrast age, variety and planting density, especially in respect of apple trees, have been shown to be valuable yield influencing characteristics, as reflecting the trends in modern orchard practice. The Directive required breakdown into 9 age classes and 4 density classes, which were specified, the former identical for all species and the latter for all species except oranges. The results show that these age classes are not optimal especially for peach trees and oranges. Peach trees have a relatively short life of 18 to 20 years, and orange trees a relatively long life of 50 to 60 years. The specified density classes were also proved to be less satisfactory for these two species than for pears and apples. For apples future provision for a further higher density class appears desirable to cover the most modern intensive plantations, especially in Belgium⁶⁾.

e) Additional characteristics (Article 2, paragraph 2)

17. Additional information on the fruit trees, eg. rootstocks, is considered to be unnecessary for the purpose of the Directive, being closely linked to planting density. It may be even undesirable having regard to the many cross classifications which could be involved, and where sampling is used, the resulting large errors for these small data cells. However for other purposes, some Member States include in their national questionnaires various general questions such as storage facilities, equipment and sales, as well as areas planted under other species of fruit and other crops.

18. A question on harvested production for each variety has been found of value in the United Kingdom and Denmark; in France a similar question has been asked for groups of varieties. Such a question may have application for yield data in some but not all, other Member States, although in France it appears that it provides an under-estimation. This subject will be mentioned under paragraph 27 and 28.

f) sampling errors (Article 3, paragraph 2)

19. The Directive requires that for surveys by random sampling

"Member States shall take every measure to ensure that sampling errors cannot be more than 3% for the whole of the area planted with fruit trees of each species".

) The independent fruit experts, engaged by the Commission in collaboration with the national statistical offices to obtain yield data, advised that it was inappropriate to separate non-irrigated areas since these areas have favourable natural conditions assuring high yields.

) Statistical details of this type are discussed within the Standing Committee for Agricultural Statistics in other agricultural sectors.

In the two States which used sampling this target level of sampling accuracy within 68% confidence limits was achieved by Italy for all species, and by France for apple trees but there was slightly exceeded for pear trees and peach trees, even using the largest size of sample which can reasonably be expected.

g) Timetable for the transmission of information (Article 4, paragraph 3).

20. The Directive specified that the results should be notified to the Commission by "at the latest eight months after carrying out the survey", and the sampling errors "at the latest ten months" afterwards. These dates were observed by Belgium, Luxembourg, Italy and Netherlands, but not by France and Germany for technical difficulties where the delays were about three times the specification.

21. In order to ensure that information is available at the Community level for policy purposes without excessive delay, a special effort is called for if the objectives of the Directive are to be achieved, especially where the survey operation is undertaken in a Member State at a time different from the "Spring" reference date. EUROSTAT tabulations might be given priority over additional national tabulations.

h) Results by production area (Article 4, paragraph 2)

22. The results for France, Germany and Italy were submitted by major production zones with broadly homogenous ecological and agricultural conditions, as defined by the Commission in cooperation with these Member States. In Belgium, Netherlands and Luxembourg the results were submitted at national level as envisaged.

B. Annual estimates of areas of fruit trees cleared (Article 5)

23. Member States are required annually to make estimates of the area cleared and to notify the results by 31 July of each year. This has been done in Belgium, Germany, Italy and Netherlands, mainly using estimates provided from the staff of Agricultural Ministries, and in the case of Belgium also based upon declarations in the annual general census of agriculture. In the case of the Netherlands and France, where clearings subsequent to their first surveys were particularly extensive, additional surveys were undertaken in 1974 on their own initiative without the Commission having recourse to the provisions under paragraph 2⁷⁾.

7) If, within a Member State, the clearing referred to in paragraph 1 has been particularly extensive and if precise details on that subject are lacking, the Member State concerned shall, at the request and in cooperation with the Commission, carry out surveys in the spring of the following year on the extent of clearing carried out on its territory since the last survey on the areas planted with fruit trees of the species referred to in Article 1 (1).

In France, the results of the orchard structure survey will provide, by comparison with the 1969 survey, a global coverage of the clearings which have occurred during this period, and a special annual survey into clearings has now been introduced with effect from 1975. Difficulties in making such estimates are not normally anticipated especially where a question on clearings can be introduced into the annual general agricultural census.

24. The statistics obtained from applying the clearing measures under Regulation EEC N°2517/69 have been taken into consideration as required under paragraph 3, but in respect of the 79 000 ha involved, only very rudimentary data were available. Therefore a special study in one Member State was undertaken in order to collect the information subsequently. The Commission in cooperation with the national government ^{com-}missioned the "Fonds d'Orientalion et de Régularisation des Marchés Agricoles" (F.O.R.M.A.) to obtain better clearing statistics for France on the basis of declarations made under Regulation EEC/2517/69. In possible future Community schemes, it will be important to provide, in addition to the financial control of such operations, adequate statistical details for the clearing policy to be evaluated (especially with regard to its statistical effect by major varieties and age classes on the fruit plantation survey results).

C) Annual details of areas of new plantations of fruit trees (Article 6)

25. The Member States have, except for Germany, not regularly provided this information which is requested annually by 31 December. The problems posed are technically similar to those under Article 5 in respect of clearings, but smaller in magnitude since rates of planting in the early 1970's as indicated from the recent basic orchard fruit surveys (by Germany, Italy and Netherlands which gave details in single years for the younger orchards) are lower than previously. It would be desirable for Member States to consider introducing the requisite questions into their general annual census (as now occurs in Netherlands and Belgium) or making special survey provisions as in France.

VI. SIGNIFICANCE OF THE FINDINGS (Article 7)

26. The Commission in cooperation with the Member States has made detailed studies of the significance of the survey results, which have been available at Community level since June 1975. At three meetings in July and November 1975 the above mentioned "Vegetable Products" Working Party has examined the survey results for forecasting purposes.

27. Implicit^{in,} and the most important^{of, the} objectives of the Directive as described in the preamble, is the calculation of medium term estimates of future fruit production potential. For this purpose data on yields per hectare are essential in combination with the statistical results from the area surveys.

28. Such yield data, with the essential age, variety and density variables, were originally lacking in almost all Member States. In the Netherlands, however, such data were available from a long and extensive series of orchard production records and has been used to produce a forecast of "normal" future production to 1980. France has established since 1971 an annual survey of "yield observations" on a sample of orchards in order to develop its crop forecasts. Elsewhere, 20 national fruit experts have been engaged by the Commission under study contract which provide this data within the main production zones, using various methods appropriate to the local conditions. Initially yield curves were drawn up based upon general experience from experimental fruit stations; later more objective survey methods were also used.

29. The yield data has been examined by the representatives of the Commission and the Member States in a series of meetings. The statistical services in several Member States have established or are considering establishing wider based yield data collection systems. Considerable improvement can be expected in future from these measures for the forecasts of Community fruit production potential which will be calculated using the model developed by the Commission in cooperation with the Member States. In addition special sensitivity studies have been commissioned at universities in the United Kingdom and Germany. The results of those studies are expected in early 1976.

VII. FINANCE (Article 9)

30. It was intended that expenditure by Member States on the first surveys of plantations be reimbursed in part from the Guidance Section of the European Guidance and Guarantee Fund, up to a maximum of 708 300 units of account in total. In fact, a total of 729 900 unit of accounts were actually paid owing to a slight adjustment in the subsequent exchange rates. It was now considered appropriate to reimburse from the normal budget of the Commission (up to a maximum of 384 000 U.C. in 1977 and 896 000 U.C. in 1978) part of the expenditure on the 1977 surveys which will, for the first time, be fully synchronised surveys for the Community and will include the three new Member States.

VIII. CONCLUSIONS

31. It may be stated that :

- (1) the Directive has met its main objective in permitting calculations of future production potential to be made. A major advance has been made in respect of the information on areas of fruit tree plantations and is being made in respect of the collection of unit yield data. The full benefit will only be obtained, however, when further surveys have been conducted in the quinquennial series.
- (2) Certain limitations in the timing of the first survey arising from the derogations under Article 1, paragraph 4 and under Article 9a (by Article 1 of the Amending Directive of 10 April¹⁹⁷⁴) were of a temporary nature applicable to the initial operation of the Directive.
- (3) The Directive, of proved value overall, can be improved in details; it is desirable to permit some flexibility to accommodate changing conditions in the fruit orchards of the Community.
- (4) The minor changes on details can best be introduced by continued close collaboration with the technical services of the Member States by following the simpler procedure of an Opinion given by the Standing Committee for Agriculture Statistics. The Commission will therefore propose to the Council amendments for the Directive.

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Financial statement

Appendix to the Report to the Council on experience acquired during the first surveys carried out by the Member States in order to determine the production potential of plantations of certain types of fruit trees.

1. Title and purpose of survey

Fruit Orchard Survey 1977, with the object of making medium term forecasts of the production potential of apples, pears, peaches and oranges.

2. Origin

Directive of the Council, 26 July 1971 (71/286/EEC).

3. Justification

The 1977 survey will be the first to be undertaken by the three new Member States in the context of the Directive.

The 1977 survey will be the first survey to be synchronised for all the Member States of the Community (those financed earlier being spread out over a time period of 5 years between 1969 and 1974).

4. Allocation and estimation of cost.

It is anticipated that the expenditure incurred by the Member States shall be reimbursed in part by the Commission at a flat rate from the budget credits for statistical studies and enquiries (article 264) for 1977 (385 000 units of account) and 1978 (895 000 units of account).

The 1971 Directive proposed a total of 729 900 units of account for 533 200 hectares in the six Member States, i.e. 1,37 u.a. per hectare. The present proposals represent 1 280 000 u.a. for 541 000 hectares in the nine Member States, i.e. 2,37 u.a./ha in 1977 allowing for inflation during this period.

In the 1971 Directive, a reimbursement at a flat rate of 7 u.a./ha of fruit plantation actually covered by the survey (say 12 u.a./ha in 1977) up to the maximum amount, was proposed for the Member States carrying out the surveys by random sampling.

