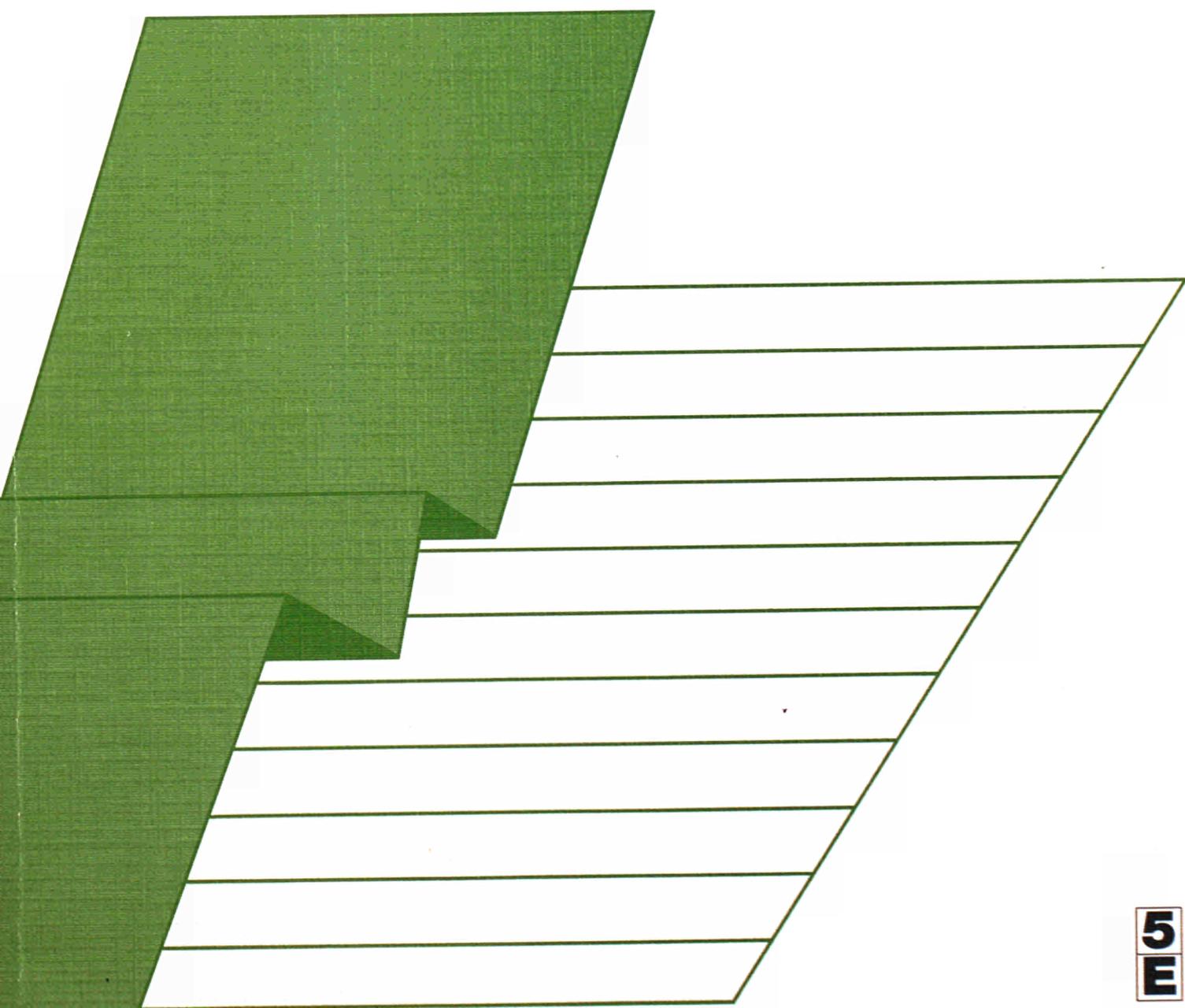


**MANUAL ON  
ECONOMIC ACCOUNTS  
FOR AGRICULTURE  
AND FORESTRY**



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Y. Franchet  
Directeur général

# MANUAL ON ECONOMIC ACCOUNTS FOR AGRICULTURE AND FORESTRY

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## FOREWORD

1. Economic accounts for agriculture have been published by the Statistical Office of the European Communities since 1964 (cf. "Agricultural Statistics 1963/4"). For the first few years, the concepts, definitions and rules of accounting were not uniform and it was not until 1969 that the six original Member States began to use the European System of Integrated Economic Accounts (ESA) (1) as the basis for their calculations covering the period from 1963 onwards. In 1969 also, the system of Economic Accounts for Agriculture (EAA) was supplemented by the system of Economic Accounts for Forestry (EAF), which was based on the ESA from the start.

2. Since the concepts, ideas and rules of accounting laid down in the ESA represent only a general framework applicable to the economy as a whole and cannot therefore make provision for all aspects specific to each of its individual branches, they have to be amplified to cover the particular requirements of agriculture and forestry. This was done initially in 1969 in two SOEC working documents (2) which were expanded in the course of the next few years.

3. The present manual is the result of further systematic development from these early beginnings; it aims to provide a coherent, practical and readily comprehensible tool for the compilation and use of the EAA and the EAF.

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(1) Statistical Office of the European Communities, "European System of Integrated Economic Accounts - ESA", 2nd edition, Luxembourg 1979.

(2) Statistical Office of the European Communities,  
- "Economic Accounts for Agriculture: Explanatory Notes to the Tables", Doc.F/LG/19.  
- "Economic Accounts for Forestry: Explanatory Notes to the Tables", Doc. F/LG/20.



## I. GENERAL COMMENTS ON ECONOMIC ACCOUNTS FOR AGRICULTURE AND FORESTRY

1. The purpose of any system of national accounts is to give the fullest possible systematic and comparable picture of the activity of an economy as a basis for analysis, forecasting and policy measures. This is achieved by classifying the immense variety and number of individual economically relevant transactions and the units involved in them on the basis of standard criteria, and representing them in a clear and meaningful form in a coherent set of accounts and tables.

2. The European System of Integrated Economic Accounts (ESA) has been developed to meet the special requirements of the Commission of the European Communities from the United Nations revised System of National Accounts (1) and prescribe standard concepts, definitions, rules of accounting and classifications for the Member States of the European Communities.

3. The set of accounts which are constructed under the ESA refer to the economy as a whole. For analytical purposes, however, the economy may be broken down in two different ways (2) :

- (i) by institutional sectors and sub-sectors which represent groupings of institutional units;
- (ii) by branches which consist of groupings of units of homogeneous production (i.e. units producing goods of a similar type).

4. The EAA and the EAF are currently compiled using the production branch concept ((ii) above) and for the foreseeable future should continue to be prepared in this way. However, it is not excluded that demands for agricultural and forestry accounts compiled according to the institutionally delimited sub-sector approach ((i) above) will arise.

5. For the agricultural sub-sector, under the institutional approach at (i) above, evaluation is made of all the goods and services, both agricultural and non-agricultural produced by those units whose principal function is the production of agricultural products. In this treatment, units producing agricultural goods as a minor or secondary activity are allocated to the sector of their main activity, and the value of such agricultural production is attributed to that sector.

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(1) United Nations, "A System of National Accounts", Studies in Methods, Series F, No. 2, Rev. 3, New York 1968.

(2) See 217 and 264 of the ESA booklet quoted at footnote (1) on page 5.

## A. THE AGRICULTURAL PRODUCTION BRANCH

6. The agricultural production branch under (ii) above is regarded as comprising all those units which produce, either uniquely or in conjunction with other economic activities:

- (i) Crops and crop products of agriculture, whether cultivated or not
- (ii) Animals and animal products of agriculture and hunting
- (iii) Grape must and wine
- (iv) Olive oil, unrefined

but not butter and cheese and other manufactured dairy products, which are regarded as industrial products. In addition, specialized units which supply machinery, material and operating staff for the carrying out of contract work at the agricultural producer stage (cf. 38.7.) are also treated as part of the agricultural production branch.

7. When compiling the economic accounts for agriculture, using the production branch concept, it is necessary to value the final production of all agricultural products no matter where and in what type of unit they are produced, but only those products. Thus agricultural products from units which are primarily concerned with the production of non-agricultural goods, and those from domestic gardens and allotments must be evaluated, whereas non-agricultural goods and services which might be produced on farms are excluded from the agricultural accounts.

8. In the case of units where several production processes are vertically integrated (e.g. enterprises which slaughter, dress and vacuum pack poultry; which grade, wash and prepack potatoes or other vegetables; which grade, dress and merchant seed; or cooperative units that provide storage and merchandising facilities etc.), the agricultural production branch includes only those sections of the enterprises that are engaged in agricultural production as defined in 6, and the final production to be valued for inclusion in the agricultural accounts should be that at the stage of the last truly agricultural activity.

9. As has already been stated in 6, those specialized units which supply machinery, material and operating staff for the carrying out of contract work at the agricultural producer stage (either commercial contract enterprises per se, or farmers acting as contractors) are treated as part of the agricultural production branch. More strictly such units, to be included in the branch "agriculture", must perform work which (a) forms part of the agricultural production process; (b) is linked to the production of agricultural products; (c) is customarily performed by workers on agricultural holdings and (d) is work which is in fact carried out in its entirety by the specialised units supplying machinery, material and operating staff.

10. If, however, the work as defined above is not carried out in its entirety by the specialized units (e.g. if the farmer hires machinery but employs his own workforce), then the activity is proper to class 84 of the NACE ("Services of renting, hiring or leasing of movables") in which case the payments made by farmers to contractors must be recorded as "Services" under "Intermediate Consumption" (cf. 38.7.3.2.).

**B. THE NATIONAL FARM**

16.1. The concept on which the EAA (1) is compiled is a modified version of the "national farm" which represents a single, national agricultural holding producing the total output of agricultural products of a country's economy. Products sold or delivered which do not return to the "national farm" are recorded in the output side of the EAA; those goods which return to the "national farm" are treated in the accounts as follows:

	Crops and crop products -----	Live animals -----	Animal products -----
Movements direct from one farm to another <u>without</u> the intervention of any person(s) or enterprise(s) out-side agriculture	A	A	A
Movements from one farm to another <u>with</u> the intervention of some person(s) or enterprise(s) outside agriculture:			
(a) where the person(s) or enterprise(s) become the legal <u>owners</u> of the goods before resale	B	C*	B
(b) where the person(s) or enterprise(s) do not become the legal owners of the goods but merely act as agents	C	C	C

A = Ignore: no entry in either the output or input side of EAA.

B = Record full output and input values.

C = No output entry: record as input only those ancillary charges incurred in the transaction (e.g. transport costs, fees, commissions, etc...).

Note (\*): This accounting treatment is designed to prevent the full value of a live animal being included in the accounts (as both output and input) every time it moves from one farm to another.

16.2. From the previous paragraph it will be realized that certain items which fall to be evaluated as output may leave, and then return to, the "national farm" for further processing (e.g. eggs for hatching, grape must), or may return after processing (cf. 65.2). These items are not necessarily in a "final" form when first recorded as output, so that the term "final output" is not, therefore, always strictly correct.

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(1) For the EAF the term "national forest" should be used; the principles to be followed are the same.

## C. COMPILATION OF THE ECONOMIC ACCOUNTS FOR AGRICULTURE AND FORESTRY

17.1. The starting point is the quantity of production of individual agricultural commodities obtained from the data for areas under cultivation, numbers of livestock and number of trees, on the one hand, and estimated yields per hectare, per animal and per tree, on the other.

17.2.1. Calculations of sales and purchases are based on statistics of purchases of agricultural products by other branches, and sales of means of production to agriculture. This approach, which would scarcely be appropriate for other branches of the economy, can be used for agriculture because the products are usually unambiguous as regards their use with the result that a reasonably accurate picture is obtained of the sales of individual agricultural products by determining the corresponding purchases by the branches concerned (mills, fodder manufacturers, abattoirs, sugar refineries, etc.).

17.2.2. The same applies to intermediate consumption goods. They are mostly of so specialized a nature that they can essentially be used only in agriculture (seed and planting stock, fertilizers, pesticides, etc.). Here too, therefore, it is sufficient to treat figures and sales from the branches supplying these intermediate consumption goods as purchases by agriculture.

17.3. There are, however, dangers in applying this general rule; for when such a method of data collection is used there is a risk that sales by agriculture will be set too low and purchases for intermediate consumption too high. In addition to the main buyers of agricultural products, there will also be a certain proportion of other buyers whose purchases should be but are not taken into account (e.g. purchase of fodder by riding stables). And the sales figures of the producers of intermediate consumption goods that are, in the main, used in agriculture do not necessarily correspond exactly to purchases by agriculture, since fertilizers, pesticides, etc. are also bought for public parks, for example. The errors introduced in this way should, nevertheless, remain within acceptable limits.

18. The full list of products comprising the agricultural production branch (cf. 6) and the forestry branch, and extensive lists of the elements of intermediate consumption and gross fixed capital formation for each are shown in separate appendices. The full product lists are reduced, for the purposes of accounting tables 0 and 1 referred to below, to "minimum" lists which are based on NACE/CLIO (1) classes 01 and 02. They form the side headings of these two tables and for each heading at least, separate quantity and price data should be collected (cf. Appendices II and VI).

19. The SOEC's system of EAA and EAF requires each Member State to complete and submit annually a set of linked tables showing quantities, prices and values of the elements of final production, intermediate consumption, value-added and gross fixed capital formation. In all, 5 tables for the EAA and 4 for the EAF are currently provided (cf. Appendices IX and X).

20.1. Tables 0 and 1 are working tables, i.e. the final output of agriculture is arrived at in stages in the form of a progressive calculation for individual products or product groups. Table 0 covers output by quantities, and Table 1 prices and value of output for the individual products or product groups

The procedure by which the calculations are made is self-evident from the arrangement of the individual tables: quantities are multiplied by the appropriate prices, thus giving the values. The division by product or product group in individual rows is identical in both tables and corresponds to the Minimum List (cf. Appendix II); its scope is determined by the wish to have the most detailed information possible within the limitations imposed by the availability of statistics and the need for clarity in the tables.

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(1) cf. 33 to 36.

The streamlining of data that clarity demands is possible only to the extent that data on quantities and prices given for product groups are still meaningful, i.e. that the ranges of individual products grouped within them are not too varied. Table 1 also contains a row entitled "New Plantations" for recording the value of fixed capital created by the planting of additional areas of orchards, vineyards, etc. Since for obvious reasons data on quantities are not appropriate for this item, a special row is not required in Table 0.

20.2. The vertical column division used in the two tables, however, is different. The first part of Table 0 covers the calculation of resources of agricultural products over a specified period from data on gross production, wastage and stocks at the beginning of the period, and the second part covers the uses of these products. A distinction is drawn here between intra-branch consumption, with separate data for seed and planting stock, fodder and miscellaneous (e.g. hatching eggs), and other uses such as the processing of agricultural products into non-agricultural products within agricultural holdings, own account consumption of agricultural products in farmers' households, production of fixed capital goods on own account (e.g. breeding livestock), and sales to firms outside agriculture. The stocks of agricultural products still available at the end of the period also represent a use, though only a temporary one, and are therefore also recorded here. Deducting the initial stocks from the final stocks gives the change in stocks. Final output is then calculated in the third part of the table from the data in the first two parts.

20.3. The first part of Table 1 contains data on the prices per unit quantity of the individual products or product groups, given separately for the categories of final use already shown in Table 0 and with special prices for sales on the domestic and export markets. No evaluation of intra-branch consumption is necessary, since the EAA records the output from the national farm (c.f. 16.1), viz. final output (cf. 59.2).

The second part of Table 1 amalgamates Table 0 and the first (price) part of Table 1; the quantities shown in Table 0 are multiplied by the corresponding prices from Table 1. Final output is calculated in Table 1, both at current prices (of the reference year) and at constant prices (of a specified base year).

20.4. It should be noted that where the entries on an individual row of Tables 0 and 1 refer to a product group rather than an individual product, the quantities and values entered may themselves be the totals of quantity and value data for individual components of the product group. In these cases, the prices shown in Table 1 will, of necessity, be unit values derived from the aggregate quantities and values.

21. Table 2 covers intermediate consumption broken down by types of goods. Only data on values are required for this. Since the actual intermediate consumption to be shown is usually obtained from the difference between purchases and changes in stocks on farms, figures should be given for all three items (at both current and constant prices).

22. Table 3 is used to calculate value-added and to show its individual elements. Firstly, the difference between the value of final output (Table 1) and total intermediate consumption (Table 2) gives gross value-added at market prices. By adding subsidies and deducting taxes linked to production, gross value-added at factor cost is then obtained. Deducting consumption of fixed capital gives net value-added at factor cost, which is then broken down into its main components. The figures should be given both at current prices for the reference year in question and at constant prices.

23. Table 4 shows gross fixed capital formation broken down by type of investment. In this case too, valuation should be carried out both at current prices and at constant prices.



## II. THE CLASSIFICATIONS

### A. GENERAL

33.1. Since the EAA is fully integrated into the European System of Integrated Economic Accounts, it is based on all the concepts, definitions and demarcations of the ESA. These include Eurostat's Nomenclature of Economic Activities in the European Communities: the NACE. For the EAA, the special version of the NACE for the establishment of input-output tables is used: the NACE/CLIO.

33.2. The NACE/CLIO is a classification of goods and is used for the definition of the branches in the input-output tables. It is based on the following coding system:

- the 1st digit indicates the "division"
- the 2nd digit indicates the "class"
- the 3rd digit indicates the "group"
- the 4th digit indicates the "sub-group"
- the 5th digit indicates the "heading"
- the 6th and 7th digits are used to define the heading further.

34. The concept "branch" does not correspond to any of these groupings, being more a combination of units of homogeneous production at any level of aggregation. In general, however, at the lowest level the 2-digit classes form branches.

35.1. In the NACE/CLIO, the branch "Products of Agriculture and Hunting" as features in the EAA is a class, numbered "01". The list of products which is used to define this branch (cf. Appendix I) is constructed on the same principle of sub-division illustrated above and is a part of the NACE/CLIO.

35.2. It is therefore axiomatic that the definition of the branch "Products of Agriculture and Hunting" is identical in the EAA and in the input-output tables. Given the differing objectives of the EAA and the input-output tables, however, there are certain special features in the way in which the list of products is broken down. The input-output tables record total resources of goods (from domestic output and imports) and their use, while the EAA shows only domestic output of agricultural products and their use. This difference affects the product list to the extent that agricultural products imported from third countries and not produced within the European Community are not assigned to their natural position in the classification but form an autonomous (3-digit) group 019 within Class 01.

The (4-digit) sub-groups correspond to the groupings customarily used in agricultural statistics, as, for example, in the SOEC for the establishment of supply balance sheets.

35.3. The product list defining Class 01 was used to compile the "Minimum List" (cf. Appendix II), which is a list of items for which data must be recorded in the EAA. The Minimum List does not, however, merely represent the product list amalgamated to a medium level of aggregation. It is rather the result of a pragmatic grouping of the product list which takes account of the varying range and importance of the individual items and, in particular, the availability of statistical data.

36. The branch "Raw Wood" used in the EAF is also a class in the NACE/CLIO, numbered 02. Since there is no sub-division by group, this class is identical to NACE/CLIO Group 020. The fairly brief list of products defining this branch (cf. Appendix V) is also a part of the NACE/CLIO. Following the same procedure as that used in the EAA, the product list defining Class 02 was used to compile a Minimum List (cf. Appendix VI) for the EAF also. This is the basis for the content of Table 1 in the EAF in which data on output are to be recorded.

## B. COMMENTS ON INDIVIDUAL HEADINGS

37. Class 01 "Products of Agriculture and Hunting" consists of six-3 digit groups, one of which, however, as pointed out above, has no relevance for the EAA since it merely groups together imported agricultural products not produced in the EEC (cf. 35.2). Of the remaining five groups, four relate to the classification of domestic agricultural products. Each of these four groups defines one single-stage sub-branch (1) of the branch "Products of Agriculture and Hunting", and they are designated as follows:

- 011 Crops and crop products of agriculture, whether cultivated or not
- 012 Grape must and wine
- 013 Olive oil, unrefined
- 014 Animals and animal products of agriculture and hunting.

The fifth group of units of homogeneous production, number 015, is provided to record contract work at the agricultural producer stage which results in the production of fixed capital goods (e.g. orchards, vineyards, afforestation of new areas). Since the result of such services is goods other than those products covered by the 3-digit groups 011, 012, 013 and 014, they are classified in a separate group. (Where the contract work does not produce the capital goods listed above but merely assists in the production of products attributable to groups 011, 012, 013 and 014, then the benefit of the contract work carried out appears implicitly in the realised value of those products and does not need to be accounted for separately.)

38.1.1. Group 011 "Crops and crop products of agriculture, whether cultivated or not" contains a systematic breakdown of all the agricultural plant products grown in the countries of the European Community and the wild plants or fruits which are customarily harvested.

38.1.2. Where there is processing of these products, the result of the processing is not recorded in classes 01 or 02 of the NACE/CLIO (exceptions to this being grape must and wine, and olive oil - cf. 38.5). This ensures that the value of output of the branch "Products of Agriculture and Hunting" contains only the figures for agricultural production *sensu stricto*. (Products which undergo processing, the result of which is the production of other agricultural products, are entered as intra-branch consumption - cf. 65).

38.1.3. Fodder plants (item 011.91) are recorded (and hence shown either as intra-branch consumption or output), only if they have been removed by means of some agricultural activity from the soil on which they grew. Fodder consumed by grazing animal on pasture land is not recorded.

38.2.1. Tree seedlings and cuttings, no matter where they are grown, form part of the branch "Raw Wood" if they are intended for the production of forest trees. Seedlings and cuttings for the production of other trees and shrubs (e.g. ornamental) are part of the branch "Products of Agriculture and Hunting".

38.2.2. Seeds for forest planting stock (from other forestry and commercial harvesting of cones and seeds) also form part of the branch "Raw Wood" and, when sold off the "National Forest" are entered under the heading "Other products" in the product list for the EAF.

38.3. Seed for products of agriculture is covered comprehensively by a 5-digit heading in the classification (heading 011.95). The only exceptions are seed for cereals and rice and also seed-potatoes, which are entered respectively under the individual cereal varieties, rice and potatoes. The reason for this deviation from the general rule is that in these three special cases most of the seed is obtained from the normal output of the corresponding cereal, rice or potato harvest, whereas in other cases it is produced in specialized holdings.

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(1) A single-stage branch is one characterized by the fact that its products generally are not used again as intermediate consumption goods in the same branch in order to produce other products.

Recently, however, the situation has changed to such an extent that, even in these three special cases, most of the seed comes from specialized production and possesses specific (high-grade) properties in comparison with other cereals, rice or potatoes. This suggests that, in the future, the present classification of cereal and rice seed and seed-potatoes may need to be reconsidered so that they might no longer be grouped together with the corresponding cereal or potatoes in the product list, but transferred to the heading "Agricultural seed" where, currently, all other seed is recorded.

38.4.1. Other products of the branch "Raw Wood". These include seeds for forest planting stock (cf. 38.2.2) as well as secondary products of timber production. Some of these secondary products occur as by-products (e.g. ornamental greenery), while others may be produced as main products with timber as the by-product (e.g. natural cork, resin, tanbark).

Other secondary products which are produced incidentally by forestry units belong, by definition, either to the branch "Products of Agriculture and Hunting" (game, wild fungi and berries), or to the branch "Fishery products" (fish caught in forest ponds and streams), or to the branch "Minerals other than metallic and active minerals, peat", or to the branch "Non-metallic mineral products" (products from stone quarries in the forest).

38.4.2. Christmas trees are regarded as products of agriculture if they are grown in nurseries specifically for use as ornamental trees, but as products of forestry if they are obtained as loppings from mature trees in forests. To prevent confusion, heading 011.944 in the product list for the EAA is entitled "Christmas trees", while in the EAF, heading 020.5 "Other products" takes in "Loppings for Christmas trees".

38.5. Group 012 "Grape must and wine"; Group 013 "Olive oil, unrefined"

38.5.1. The reason why grape must is included in the list of products as well as wine is that it may be sold or exported as such or, on the other hand, it may be included in changes in stocks and then, in a subsequent reference period, be sold or exported for consumption, or used for processing into wine.

Since wine, olive oil and grape must (the latter only insofar as it is not processed into wine in the reference period) are counted in the final output of the branch as the result of the processing of grapes and olives, to avoid duplicated entries neither the grapes used for the manufacture of wine and must, nor the olives used for the manufacture of olive oil (i.e. the primary product in each case) should be counted in final output. They appear instead in "intra-branch consumption" (cf. 65).

This means that grape must originating from earlier reference periods which is processed into wine in a given reference period, must be entered as intra-branch consumption for that period, so that it is not counted in final output a second time. At the same time a corresponding decrease in stocks must be recorded. (Being the result of the processing of grape must, the wine produced must be recorded in the appropriate row as a component of final output).

38.5.2. In contrast to olive oil, in the case of wine it is the finished consumer product which is recorded (but not vermouths, champagnes, etc. which are products of the processing of wine and therefore deemed to be industrial products according to the NACE/CLIO).

38.5.3. In the case of olive oil, it is not the finished product which should be recorded, but only the result of the first pressing ("prima premitura").

## 38.6. Group 014 "Animals and animal products of agriculture and hunting"

38.6.1.1. As with crops and crop products (cf. 38.1.1), this group contains a systematic breakdown of all the livestock and livestock products which are produced in the countries of the European Community. Details are given in Appendix I.

38.6.1.2. Because of the problems involved in defining "calves" as distinct from "other cattle under 1 year old", it has been decided to include calves with cattle in the Minimum List (Appendix II). This implies that animals which have ceased to be calves, but which remain on the national farm as mature animals, do not have to be entered as intra-branch consumption in Table 0 of the EAA.

38.6.2. The by-products which are the automatic residues of the production of certain agricultural products are not listed with these in the classification, but are shown separately at the end of each group of products, broken down by type. Examples of by-products are straw, beet and cabbage leaves, pea and bean husks, etc. in the case of plant cultivation; winelees and argols in wine manufacture; residues such as olive-oil cake in olive oil manufacture; and, in animal production, skins, animal hair and pelts of slaughtered game, as well as wax, manure and liquid manure. As a rule, all of these products are produced incidentally, and accurate statistical data are, therefore, only very rarely available. They are used predominantly within agriculture itself as animal fodder or for soil improvement. Sales of these by-products to branches of the economy outside agriculture do occur, however, and when this happens the value of the output must be recorded in the EAA.

## 38.7. Group 015 "Contract work at the agricultural producer stage"

38.7.1. In the course of the process of economic differentiation, agricultural holdings or households have long since given up certain functions which have been taken over by a growing number of specialized professions with their own producer units. This process of segregation of functions first affected activities involved in the processing of agricultural products (transfer of the slaughtering and processing of meat, milling of grain and bread manufacture, butter and cheese manufacture, and seed treatment, into newly established branches), and later extended to marketing. In the last two decades in particular, some agricultural activities which contribute directly to the production of crop products and the rearing of livestock have also been increasingly hived off to specialized units as intensified structural changes in agriculture have been accompanied by the use of larger machinery.

38.7.2. These activities include, for example, fertilizing, liming, ploughing, sowing, weed and pest control, plant protection, reaping, threshing (1) and sheep-shearing; and in forestry, stump-grubbing, forest soil preparation, the felling, primary conversion and stacking of timber, and skidding to the side of the road.

All these activities are characterized by the fact that they constitute work which is customarily necessary in the course of the production of agricultural and forestry products, and are linked to the production of those products.

Activities which are not directly linked to the production of agricultural products, i.e. do not take place at the agricultural producer stage, such as contract transport (e.g. the delivery of milk to the dairy, and in forestry the transportation of timber beyond the side of the road) are instances of a "secondary activity" appertaining to a different branch and should not be included in the EAA or EAF.

38.7.3.1. Contract work is allocated to the agricultural branch even if it is carried out by specialized enterprises. The main reasons for this are as follows:

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- (1) Threshing, on the other hand, can also be cited as an example of the incorporation of functions. In areas with a structure of predominantly small holdings, threshing machines were previously often operated by threshing cooperatives, municipal bodies and contract enterprises. The growing use of combine harvesters over the last two decades, however, has meant that threshing has become more widespread in smaller holdings also.

- (a) The activities involved are ones which customarily devolve upon agricultural holdings, always in connection with the production of agricultural products.
- (b) To enter these activities in a different class of the NACE/CLIO (1) would:
  - infringe the basic principle of the structure of this classification, according to which the goods are to be classified and grouped independently of the institutional context in which they are produced. Moreover this principle still holds good (and is undisputed) in industrial branches where contract work linked to the production of goods defining a branch also belongs to that branch (this covers holdings which treat textile products under contract to the textile industry, e.g. by dyeing or proofing, and holdings which process textile products under contract to the clothing industry, e.g. making them into articles of clothing);
  - depart from concordance with the UN classification (2) and most national classifications which require data on these specialized enterprises to be included in statistics on agriculture.

38.7.3.2. It should be noted that classification in this way of the activities in question is valid only if they are undertaken in their entirety by the special units. If, on the other hand, the units merely hire out the machines alone (without the necessary operating staff), for example, or hire out machines with only some of the operating staff required, so that the activity proper is still carried out, with the aid of these hired machines, by the farmer, this activity comes under Class 84 of the NACE ("Services of renting, hiring or leasing of movables"). This is particularly common in the case of simple and relatively reliable machines, especially during the peak season of their use. (Cf. 10)

38.7.4. Contract work at the agricultural producer stage consists primarily of activities involving the use of expensive machines and equipment. It may be provided by:

- (a) Specialized contract enterprises which provide these activities as their principal occupation (commercial contract enterprises **sensu stricto**).
- (b) Agricultural holdings

In this second case the contract work is mainly provided in the following forms:

- As a sideline of the individual farmer, in its loosest form as occasional help to neighbours. This also includes the acceptance of boarded-out livestock and (mainly for pigs and poultry) the keeping of animals on a contract basis (especially contract fattening). This may be undertaken by one farmer for other farmers, or the animals may belong to a holding within the industrial economy, usually a supplier (e.g. fodder manufacturer or dealer) or a customer (e.g. abattoir).
- In the form of a more or less autonomous machine pool which constitutes a systematic further development of providing help to neighbours. The high cost of machines and the lack of balance within individual holdings are giving impetus to the formation of machine pools by the association of holdings owning machines which are made available, with the required operating staff, to other holdings. Professional farmers will carry out contract work in this way to an increasing extent for farmers who are active in agriculture only as a secondary occupation, possibly only as owners of the land.
- In machine cooperatives (3). In the case of large cooperatives employing paid staff, these also resemble the specialized contractor.

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(1) Cf. 33 to 36.

(2) "International standard industrial classification of all economic activities", United Nations, New York 1968.

(3) In contrast to machine pools, in which the machines and equipment concerned are the property of the individual holdings, in the case of machine cooperatives they are under joint ownership.

- (c) Enterprises involved in a subsequent production stage which take over the harvesting of the crops or fruit to be processed by them (e.g. canning factories under the terms of contract pea growing).
- (d) Enterprises involved in an earlier production stage. This includes, for example, contract work provided by the agricultural machinery trade. Although other cases are very unlikely for the EAA, it would be theoretically feasible, for example, for a pesticide manufacturer to undertake the spraying of the substance himself. If, however, this involves the use of completely new methods, it is not necessarily contract work at the agricultural producer level, viz. not if it does not consist of work customarily carried out by farmers (e.g. use of aircraft in pest control).

38.7.5. In deciding whether, in accordance with the definition given in Group 015 of the NACE/CLIO ("Work forming part of the agricultural production process which is customarily provided by agricultural holdings themselves"), an activity should be deemed "Contract work at the agricultural producer stage", it should be noted that the type of activity is not the only important factor; it also has to be performed in a specified context, namely, "forming part of the agricultural production process". This means, for example, that soil cultivation provided for forestry by contract enterprises which normally perform this activity (e.g. ploughing) for agriculture is contract work not for agriculture but for forestry (and must therefore be classified as such).

The keeping of farm animals on a contract basis (boarded-out livestock), for example, belongs to contract work at the agricultural producer stage since it forms part of the process of producing agricultural goods; this heading does not, however, include the maintenance and care of private saddle-horses (I), which does not form part of the agricultural production process but is a true "service" (in the sense of the ESA), and should therefore be recorded under Class 98 "Personal services" of the NACE. Similarly, work involved in the creation and maintenance of parks, gardens, golf courses, and street plantings should not be regarded as part of the agricultural (or forestry) production processes.

38.7.6.1. The form of reimbursement of the "contract"-entrepreneur is not important. There need not be any agreement on a fixed reimbursement (i.e. "hire" **sensu stricto**); the reimbursement may equally well take the form of a share in profits or be effected in various combined forms. (For example, a farmer who fattens calves on a contract basis generally receives a fixed payment per calf plus a share of the net profit). Reimbursement may possibly also take the form of a specified share of output.

38.7.6.2. However, in all cases the services must be provided by autonomous enterprises; work done by employees of the holding does not come under this heading. Payment for work of the latter category (e.g. the work of an employed milker) represents wage costs in the agricultural holding and is shown under the heading "Compensation of employees". On the other hand, the services of a contract enterprise which undertakes milking, even though they represent exclusively intermediate consumption for the individual agricultural enterprise which purchases these services, is entered in the EAA both partly as intermediate consumption and partly as gross value-added. In this case the intermediate consumption comprises the intermediate consumption goods purchased by the contractor; the gross value-added is that generated by the contract enterprise, including the compensation of employees paid by it, its consumption of fixed capital on the means of production it uses, the taxes linked to production paid by it, etc. The entrepreneurial income deriving from this production activity, therefore, is generated independently of whether the paid milker is employed by the farmer or by the contract enterprise, i.e. irrespective of whether the net operating surplus has been generated in the agricultural holding or in the contract enterprise.

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(I) Cf. 108 for the treatment of non-farm animals.

38.7.7. In accordance with the national farm concept, the output from contract work appears as a separate component of final output only in exceptional (1) cases; it usually occurs as intra-branch consumption in which cases the actual value of contract work is, of course, included in the values of final output of those agricultural products for whose output the contract work was necessary.

However, contract work connected with the own account production of additional capital goods (e.g. soil cultivation and planting resulting in the establishment of additional areas of vineyards and orchards) always appears in final output, since although this contract work does not produce any output of agricultural products, it produces an addition to capital assets. In these cases, input entries in the EAA are made as already described in 38.7.6.2, and the sum of these input entries is included in the final output table at the intersection of the row "New plantations" with the column "Own account produced fixed capital goods". The same accounting procedure is followed if the farmer himself, without employing contractors, produces the additional plantations.

38.7.8. Finally, for completeness, reference should perhaps be made to the question of the concurrence with the ESA of the accounting principles governing the recording of contract work set out above. Doubts have been expressed as to whether the inclusion of contract work in the branches discussed here conforms with the ESA. These doubts are based on the fact that in the ESA and the NACE/ CLIO a rigid distinction is drawn between branches which produce goods and branches which provide services. Accordingly, it has been argued that contract work should be allocated to a services branch of the NACE/CLIO (as has been done expressly for "Services of renting, leasing or hiring agricultural machinery and equipment without permanent operating staff"). The counter-argument to this is that contract work in no way constitutes a service in the sense of the ESA or the NACE/CLIO. Services in this sense include only those which never have or at least do not normally have any recognizable connection with the output of goods (e.g. the services of artists, dancers, sports coaches, hairdressers and domestic servants) or are simply a secondary requirement of varying importance to the output of goods, fostering it to varying degrees, e.g. refuse disposal services, doctors and lawyers, transport services and insurance companies, employers' federations, and also agricultural advisory services. The position is quite different in the case of contract work, which is so closely and indissolubly linked to the output of goods that such output would be impossible without it; it should therefore itself be regarded as output of goods.

It has, in any case, already been pointed out (cf. 38.7.3.1) that contract work relating to the output of industrial goods is also recorded under the relevant branches producing the goods.

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- (1) These exceptions would be more frequent for the sub-sector than for the branch; for example, harvesting work performed by an agricultural enterprise on a contract basis on a field belonging to an enterprise which has feedingstuffs manufacture as its main emphasis appears in the final output of the sub-sector Agriculture, whereas in the branch this work is regarded as intra-branch consumption and therefore does not count towards final output (by definition the crop in this field is included in the branch but not in the sub-sector of Class 01).



### III. TRANSACTIONS IN GOODS AND SERVICES

#### A. GENERAL RULES

##### 1. Reference period

39.1. The reference year for the EAA and the EAF should be the relevant calendar year.

##### 2. Data on quantities

40.1. Quantities should be shown in 1 000 t (in 10 000 hl for grape must and wine), to one decimal place.

For animals, live weight is used as the basis.

40.2. In the EAF, the quantities of timber felled should be shown in 1 000 m<sup>3</sup> roundwood volume under bark, to one decimal place.

##### 3. Data on prices

41.1. In the EAA prices should be shown per tonne (per 10 hl for wine and grape must).

41.2. In the EAF, prices should be shown per m<sup>3</sup>.

41.3. In both the EAA and EAF prices should be recorded either to the nearest whole number or correct to one or two decimal places depending on the statistical reliability of the prices data available.

##### 4. Data on values

42. Values should be shown in millions of national currency (Italy: milliards of lire), to one decimal place.

##### 5. Time of recording

##### 43. Output of goods

43.1. The output of goods is recorded at the moment when the production process is completed, i.e. when the goods become usable.

If the production process of any item other than crop products has commenced but has not been completed by the end of the current reference period, then, in accordance with the general rules of the ESA, such items are recorded with the stocks of these products existing at the end of that period as semi-finished products, only the materials and services provided up to the end of this reference period being costed. The difference between the stocks of finished and semi-finished products existing at the beginning and at the end of a reference year (known as the change in stocks) is regarded as part of the output of the reference period concerned.

43.2.1. As an exception to this general rule, the situation is somewhat different for crop products from agriculture and also for forestry products. According to 352 of the ESA, standing crops and standing timber do not count as stocks of goods (either finished or semi-finished) and should be excluded from the calculation of output for the period concerned.

43.2.2. In industrial holdings, the raw materials supplied for processing do not lose their value for a single moment from the time when they enter the enterprise, throughout their processing in the production process, and up to the time when they leave the enterprise. All that is involved is a conversion from raw materials via semi-finished products to finished products, since their deduction from stocks of raw materials in the accounts when they are put into use is balanced by an addition to the stocks of semi-finished products and, after manufacture is completed, an addition to the stocks of finished products. The costs incurred in any reference period are offset by an increase in value of output. The justification for this procedure lies in the fact that, through the use of materials and other means of production and labour, corresponding real values are created which are physically tangible and can be weighed, measured and counted.

43.2.3. For crop products in agriculture and for forestry products, the situation is different in that the raw materials used, such as seed, fertilizers etc., initially lose their value along with the other costs of sowing and soil preparation, particularly wages. The cost of these services and materials used cannot immediately be offset in terms of material goods produced. Only after the completion of a biological process of conversion terminated by harvesting does there once again exist a material product which can be assessed and valued independently. The outcome of the farmer's services is uncertain right up to this moment, since the biological process of conversion can be adversely affected by environmental factors. The ESA prescribes, therefore, that recording as output cannot take place until after harvesting is completed.

44.1.1. For the other (i.e. non-crop) products from agriculture, on the other hand, ESA rules allow that the cost of materials and services which have been used in a production process that has not yet been completed should be offset by an increase in the value of output (i.e. as stocks) to be recorded at the end of the reference period. This, for example, includes the rearing of livestock, wine production, and even eggs hatching in incubators, which are no longer eggs but not yet chicks.

44.1.2. Livestock production normally requires a period of time, possibly spanning several reference years, before the process is completed. From the time of birth of the animals it is possible and also appropriate to record an entry for each phase of production, i.e. for each age group of individual animals. (It is, however, impossible to record that part of the production process which precedes birth, since this cannot be isolated from services consumed in rearing the parent animal).

44.1.3. According to the provisions of the ESA, the production process for draught animals is formally completed at the time of their birth, and from this moment they are recorded as capital assets (cf. 92.1.1). The animals are, of course, not then ready for their intended use, but the individual variations are such that any selection of a fixed age for all cases would be highly arbitrary. The moment of birth has been selected for practical reasons, particularly since the subsequent use to which they will be put (i.e. as draught animals) is already determined at this early stage.

44.1.4. This is not so with cattle, pigs, sheep and other livestock which may be reared either for breeding purposes or for slaughter. Such animals are, therefore, counted as stocks and not as capital assets until the moment at which they formally enter the breeding herds or flocks to be used as milk cows or for breeding purposes.

Animals described as "intended for breeding" but which have not yet entered the breeding herd or flock (in the strict sense), and animals which have been removed from the breeding herds or flocks prior to slaughter are also counted as stocks and not capital assets.

44.2. Chick production constitutes a special case if it spans two reference periods. Eggs hatching in incubators at the end of a reference period are regarded as output of chicks (thus corresponding to semi-finished industrial products) and are consequently recorded in the EAA as output of poultry.

44.3. Fermenting grape must, which, although no longer raw must, is still not yet wine, is treated at the end of a reference period in the same way as eggs hatching in incubators and is shown in the EAA as semi-finished wine.

#### 45. Intermediate consumption

45.1. Goods should be recorded at the moment when they enter the production process, i.e. the moment when they are actually consumed, and not the time at which they are purchased or taken into storage.

The consumption of goods for a given reference period can, in practice be calculated (cf. 97.2) by adding to the goods purchased or acquired, the stocks existing at the beginning of the period and deducting stocks existing at the end of the period (1).

45.2. Services (insofar as they are purchased separately, i.e. not in connection with goods, such as trade and transport services) are recorded at the moment when they are purchased. Since services per se cannot be stored, the moment of purchase is also the moment of consumption.

Exceptions to this rule are:

- Services purchased in connection with the purchase of goods, such as trade and transport services. These are recorded as intermediate consumption at the moment when the goods in question are consumed.
- Services which are to be considered as permanent, such as insurance services. These are recorded at the end of the reference period using the proportion of the payment due for the year, or part-year, in question. Accordingly, figures recorded are not necessarily the total insurance premiums paid within the period concerned.

#### 46. Gross fixed capital formation

46.1. Gross fixed capital formation is recorded at the moment when the usable capital goods are made available to the user. (But cf.44.1.3 regarding draught animals).

46.2. However, in the cases of the establishment of new orchards or vineyards (fixed capital goods produced on own account), if all the work necessary has not yet been completed at the end of a given reference year, the value of the materials and services used within the reference year are recorded as gross fixed capital formation at the end of the period. The same applies to the afforestation of new areas.

46.3. Net purchases of land. Purchases and sales of land and the associated costs (cf. 92.4 and 93) are recorded at the moment of transfer of ownership.

#### 47. Changes in stocks

47.1. Changes in stocks can be recorded in two ways:

- As the difference between the stocks existing at the end and at the beginning of the reference period. In this case the changes in stocks are recorded at the end of the reference period.

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(1) Cf. 47.2, 47.3 for the time at which the input stocks mentioned here are recorded.

- As the difference between goods put into stock and goods taken out of stock throughout the course of the reference period.

In theory, both methods give the same result.

47.2. Goods put into stock are either goods intended for use in the production process later (input stocks), in which case they are recorded at the moment of transfer of ownership; or else they are own products to be put to a future use, e.g. by sale or by transfer to own capital assets (output stocks).

Finished own products are recorded as stocks at the moment when their manufacture is completed.

In the case of unfinished own products, the value of the materials and services provided within a reference period is also recorded as stocks at the end of that reference period. The exception to this rule, viz. that standing crops etc. are not to be so recorded, has been discussed in 43.2.1. The result of this exception is that a proportion of the materials and services provided during a reference period will have been consumed without an offsetting increase in the value of stocks.

47.3. Goods removed from stock are, in the case of input stocks, goods intended for use in the production process. They are deducted from stocks at the moment of actual consumption. Where the goods removed from stock are output stocks, they are for sale or other use. They are deducted from stocks at the moment of sale or other use.

## **B. OUTPUT (cf. ESA 304-315)**

### **1. General comments on the concepts of output in the ESA and EAA**

56. Throughout the English text of the ESA, "production" denotes the process and "output" the resulting goods or services; it is important to bear this distinction clearly in mind.

57. Whereas the ESA, for "input-output" analysis, **inter-alia**, requires total output to be recorded in the accounts, the EAA uses the more limited concept of "final output" (cf. 16.2 and 59.2). The difference between the two concepts is represented by certain elements of intra-branch consumption the values of which, in the ESA, are entered both on the output and input sides of the account. Thus, "value-added" in the ESA is identical with that in the EAA although "input-output" ratios are not.

58. Although the importance, for purposes of analysis, of the concept of "total output" is well-recognized, the difficulties in establishing the true quantities of intra-branch consumption in agriculture, and in evaluating these quantities, are such as to preclude the use of "total output" in the EAA for the time being at least.

### **2. The individual quantities**

59.1. In Tables 0 and 1 of the EAA and Table 1 of the EAF (cf. Appendices IX and X), final output for the individual items in the "Minimum List" (cf. 35.3, 36 and Appendices II and VI) is developed in steps, starting from quantities (Table 0 of the EAA and Table 1 of the EAF). (No quantity data are shown along the row "New Plantations" - cf. 69.2).

59.2. The starting point for this progressive calculation (1) is either

- gross production (col. 1q) or
- usable production (col. 3q)

depending on whether the official harvest statistics include or exclude field, harvesting and farm wastage.

Schematic representation of agricultural final output

Gross production						
Wastage	Usable production					Initial stocks (I)
Total resources						
Intrabran- ch consumption	Processing by producers	Own consumption	Sales	O (* )	Final stocks (F)	
					F-1 (**)	
Final output						

\*) Own-account produced fixed capital goods.

\*\* ) Change in stocks (in the above diagram, it is assumed that final stocks are greater than initial stocks).

## 60. Gross production (1q) (2)

60.1. In accordance with the branch concept (cf. 6), all agricultural products as defined in the product list forming the branch "Products of Agriculture and Hunting" (cf. 35.1) (including animals bought in for further rearing and fattening) are recorded here, irrespective of the institutional context in which their production occurs. All agricultural produce must therefore be entered here, including, for example, that produced in the gardens of persons other than farms, and in agricultural producer units of non-agricultural enterprises.

60.2. For those items in the Minimum List which are groups of products of fairly widely varying types (e.g. fruit, vegetables), there is little point in entering one overall quantity figure. In such cases, blank rows are provided for recording the most important individual types for the country concerned. (Where only data on values are available, quantity data are simply omitted).

(1) The EAF does not yet contain this progressive calculation because of the difficulty in acquiring data; quantities and prices are shown only as overall figures.

(2) This column is for completion by those countries whose official harvest statistics include wastage.

61. Wastage (2q)

61.1. This includes field, harvesting and other losses on farms. Losses occurring during the various marketing stages, i.e. during transportation from the farm, during storage with dealers and during processing or treatment should not be included here.

Products offered for sale by producers but remaining unsold and therefore spoiled (particularly fruit and vegetables) should also be entered here. They must be separately identified.

61.2. The method of calculation and the nature of the statistical input material used by a given country determines whether any entry is made in the "Wastage" column (2q) in the rows provided for details of animal production. If output is calculated from data on initial and final stocks as well as from sales of animals and the transfer of animals to capital assets, it is unnecessary to record any losses occurring during production since such losses are no longer included in the final stocks. It is only if animal production is calculated without reference to data on stocks (as in the theoretically possible case of a calculation based on birth figures) that losses occurring during the production process of the reference period in question must be entered here. In this case they should include losses of any animals brought in for further rearing or fattening, or of animals born in previous reference periods.

62. Usable production (3q) = gross production minus wastage (at the producer stage)

This is the first item to be entered by countries whose official harvest statistics do not include wastage (cf. 59.2). It constitutes the disposable production of the reference period, which will be either marketed, used as a means of production, processes by the producer himself, consumed within his household, put into storage, or possibly, used as own-account produced fixed capital goods.

63. Initial stocks (4q)

63.1. These constitute the finished or semi-finished stocks of own products existing in the branch (i.e. held by producers) at the beginning of the reference year. Stocks at the various marketing stages, and also intervention stocks, should therefore not be entered here (cf. 102 regarding the treatment of livestock).

63.2. The stocks entered in the "Poultry" row should include any eggs hatching in incubators at the beginning of the reference period, since these are regarded as semi-finished poultry products (cf. 44.2).

64. Total available resources (5q) = usable production plus initial stocks.

65. Intra-branch consumption (6q to 8q = 9q)

65.1. These columns must show agricultural products of own (domestic) production used as means of production within the branch. They include:

(a) Consumption within the holding, i.e. own products directly re-used by producers such as grapes, grape must and olives (cf. 38.5.1).

(b) Direct sales to other producers of agricultural holdings, i.e. products such as seed and feedingstuffs sold directly from one producer to another without trade intervention ("direct sales", "intra-agricultural trade", "farm-to-farm trading"), excluding livestock sales (cf. 16.1, 106).

65.2. On the other hand, products sold to and re-purchased from other branches (including the trade) by producers (with the exception of livestock - cf. 16.1, 106) should be entered as sales and subsequently as purchases of intermediate consumption goods. These include goods subjected to treatment and processing and their by products (e.g. the return of skimmed milk, bran, oilcakes and sugar beet slices and tops, and the return of seeds after treatment). In the case of contract milling, re-deliveries of bran and fodder meal appear as intermediate consumption purchases but re-deliveries of flour for human consumption are not entered in the EAA since they constitute purchases by households.

65.3. Intra-branch consumption is broken down into:

- Seed and planting stock. The seed to be entered here is the total used for cultivation in the given reference year; it should not include seed held back from the output of the same reference year for cultivation in the next reference year (which is to be included in the "Final stocks" column of the product concerned - cf. 70.2).
- Feedingstuffs. The quantity to be entered here, as with seeds, is the total amount consumed by animals in the given reference year including any feedingstuffs carried over from an earlier reference year (which will have appeared as opening stocks).
- Other intra-branch consumption

In addition to eggs for hatching, this includes:

- grapes used for the manufacture of grape must and wine and olives used for the manufacture of olive oil
- grape must originating from earlier output periods which is processed to make wine within the given reference period

66. Processing by producers (10q)

66.1. Entries under this heading should show all quantities processed by agricultural producers (e.g. milk processed to make butter or cheese, apples processed to make apple must and cider). This processing must be for purposes other than own consumption in the producer's household (which is entered under column 11q "Own consumption, cf. 67). Only the raw products (e.g. raw milk, apples) should be recorded, and not the processed products manufactured from them (e.g. butter, apple must and cider). In other words, the result achieved in the processing of agricultural products is not recorded, since the product list defining Branch 01 contains only raw products (with the exception of wine, grape must and olive oil). (1)

67. Own consumption (11q)

67.1. This includes:

- (a) Products consumed in the households of agricultural producers which they have produced themselves or obtained from intra-agricultural trading. Quantities for processing in the households are also included, the stipulation made under 66.1 applying analogously: e.g. in the case of domestic slaughtering, only the livestock is recorded and not the sausage, ham, preserved meat, etc. The processing costs are of no relevance here, since they are incurred in the sphere of the producer's household.

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(1) The products obtained as a result of processing by producers would, of course, be included in the output of the "Sub-sector" Agriculture (cf. 5).

- (b) Own products, or products obtained from intra-agricultural trading, used for payment in kind as remuneration to staff employed in the holding, or as barter for other goods. Remuneration in kind per se does not represent own consumption in the sense of the ESA but it is treated as notional sales by an entrepreneur to his employees.

67.2. The imputed rent of an own flat or own house does not appear here, but in the branch "Services of letting of real estate by the owner", since the letting of accommodation does not constitute an agricultural activity.

68. Sales (12q)

This heading covers all sales made to branches outside agriculture, including sales to storage and intervention centres.

69. Own-account produced fixed capital goods (13q)

69.1. In the branch these include only

- services provided by units in the branch (e.g. use of labour, machines and other means of production including planting stock) for the own-account establishment of orchards, vineyards, hop-fields, berry plantations, asparagus beds and Christmas tree plantations and also forest stands, insofar as they represent additions to existing areas (cf. 96.1).
- livestock produced within the branch which has been transferred to its capital assets (cf. 104).

69.2. Since the services provided for the own-account establishment of orchards, vineyards, etc. are made up of a large number of individual services which cannot be totalled from the quantity aspect, no entry can be made for the relevant quantities in column 13q at its intersection with the row "New plantations". However, the use of planting stock which is not re-purchased via the trade is shown in column 13q against the appropriate row, and similarly for net transfers of livestock to breeding herds or flocks (cf. 91.1).

70. Final stocks (14q)

70.1. These include the finished or semi-finished stocks existing in the branch (i.e. held by producers) at the end of the reference year. Stocks at the various marketing stages (particularly the trade and processing stage) and intervention stocks should not be entered here.

70.2. Products which are only temporarily stocked and are consumed in a later period within the branch (e.g. cereals for feed, seed and planting stock, etc.) should also be entered here. This theoretically unsatisfactory arrangement (counting products as final output in a given reference year although they will eventually form part of intra-branch consumption) is unavoidable, since the final use of the product cannot be anticipated when the stock is being established.

71. Total uses (15q)

This entry is the sum of columns 10q to 14q.

72. Change in stocks (16q) (= 14q minus 4q) (= additions to stocks A - withdrawals from stocks W)

This column indicates the change in stocks in the branch (excluding stocks at the various marketing stages) during the reference year, i.e. the difference between final stocks and initial stocks (cf. 97).

### 73. Final output of the branch (17q)

73.1. This is the most important item of data in the table, and is obtained from the steps which precede it. It is the sum of the data on quantities for all types of final use of all agricultural products.

73.2. The following special features should be noted for EAF:

- 1) Changes in stocks of standing timber must not be included (cf. 43.2.1) with the exception of new plantations constituting additions to existing stocks of forest areas which are counted in final output as own-account produced fixed capital goods (cf. 91.2, 92.3.2). Only the actual cut during the reference period should be treated as timber production. Major reductions of resources occasioned by extraordinary fellings (e.g. as a result of favourable market conditions, or natural disasters such as windthrow, or attack by pests or fungus diseases, etc.) should also be treated as output within the EAF definition. To make it possible to estimate such distortions in comparisons between countries and over time, these exceptional timber cuts should be included in Table 1 of the EAF as a sub-entry with an explanatory note.
- 2) In accordance with the branch concept, timber production occurring incidentally outside forests (along roads, streets and streams, in parks, gardens, etc.) should also be shown. The costs incurred in this production must, of course, be entered accordingly.

As far as possible, this irregular output of timber outside forests should be shown as a sub-entry, preferably sub-divided into tree-length logs and cordwood.

### C. **INTERMEDIATE CONSUMPTION** (cf. ESA 320-325)

74.1. Intermediate consumption comprises all goods (other than fixed capital goods) and market services consumed in the production process (theoretically, by the "national farm") in order to produce other goods. In a detailed classification by individual types of goods it shows the interlocking of agriculture with other branches of the economy from the input side. It is also an appropriate indication of the intensity of production in agriculture.

Intermediate consumption goods which have been produced within the national farm are recorded as intermediate consumption only insofar as, and to the extent that, they have also been recorded as output (cf. 16.1).

74.2. Intermediate consumption also includes all expenditures for goods and services which although they benefit employees are made primarily in the employer's interest (1)(e.g. reimbursements or allowances for travelling, separation and removal expenses incurred by employees in the course of their duties).

74.3. Intermediate consumption is shown in Table 2 of the EAA in 10 individual headings and in Table 2 of the EAF in 6 individual headings. It should be noted that in these tables, contrary to the ruling given in the ESA for the establishment of input-output tables, entries concerning goods are to be shown inclusive of the transport services and trade and insurance services contained in the acquisition (or purchasers') price. Apart from the fact that this simplifies the calculation, the arrangement has the additional advantage that each individual type of intermediate consumption is shown with the total amount expended in acquiring it.

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(1) This is generally the case if production is promoted, and in some cases only made possible, by this expenditure by the employer.

## 75. Seed and planting stock

75.1. This heading covers the consumption of bought-in domestic and imported seed and planting stock for current production, and for maintaining stocks in vineyards, orchards, etc., Christmas tree plantations and forest areas (cf. 92.3.2); it does not include seed and planting stock purchased directly from other farmers which is recorded only as intra-branch consumption (cf. 65.1). All domestic seed and planting stock purchased through the trade is therefore treated as intermediate consumption (even if it has undergone no processing by the trade).

75.2. As regards the consumption of seed and planting stock for the establishment of new vineyards, orchards, etc., and Christmas tree plantations constituting additions to existing areas and for the afforestation of new areas and conversions, cf. 96.2.

## 76. Animal feedingstuffs

76.1. This heading covers the consumption of all bought-in domestic and imported feedingstuffs, whether processed or not, with the exception of that purchased directly from other farmers (cf. 75.1).

76.2. The costs incurred in the preparation and preservation of feedingstuffs must be shown broken down by type of cost and are not entered together with the feedingstuffs themselves (e.g. energy costs and costs for chemical preservatives, etc.). Where no special row is provided for them in Table 2, they should be shown in the "Miscellaneous" row.

## 77. Fertilizers and soil improvers

77.1. Soil improvers include for example lime, peat, sludge, sand and synthetic foams.

## 78. Plant protection preparations and pesticides

These include herbicides, fungicides, pesticides and other similar inorganic and organic substances (e.g. poisoned bait).

## 79. Pharmaceutical products

Only medicines which are invoiced separately from the veterinary surgeon's fee should be recorded here. (Medicines administered directly by the veterinary surgeon and included by him in his bill are entered jointly with his fee - cf. 83).

## 80. Energy

This heading covers electricity, gas and all other solid and liquid fuels and propellants.

It should be noted that only the consumption of energy on agricultural holdings is to be shown, and not consumption in farmers' households.

## 81. Livestock

81.1. As explained in more detail in the appendix to this chapter, livestock purchases should only be shown here insofar as they relate to purchases from non-domestic sources, e.g. imports of livestock not regarded as fixed capital (cf. 104).

Animals regarded at the time of importation as fixed capital assets are recorded only in the "Gross formation of Fixed Capital" account (cf. 103).

81.2. In contrast to the arrangement adopted for seed and planting stock and for feedingstuffs purchases, livestock purchased through the trade from domestic output is not recorded either as sales or as intermediate consumption. The value of this livestock is not entered under any heading (cf. 16.1 and 106).

81.3. Only the "costs of intra-agricultural exchange" incurred in these domestic transactions, and in the turnover of livestock within the national farm, (notably trading margins, transport costs and veterinary services) are entered as intermediate consumption and are recorded under the heading "Services" (cf. 83).

81.4. Similarly, transport etc. costs not included in the prices of imported animals, or of animals treated as fixed capital, are also entered under "Services".

## 82. Equipment and tools: maintenance and repairs

This heading includes:

- purchases of small tools, working clothing, spare parts and durable equipment of low value (less than 100 units of account at 1970 prices) or with a normal service life of less than one year (cf. 92.1.1)
- purchase of tools, equipment and working clothing made by employees with a special allowance provided for this purpose or withheld from their wages and salaries by contractual agreement
- purchase of goods and services for maintenance (i.e. running replacement of individual damaged or broken parts of a capital good) and repairs required to keep capital goods in usable condition (cf. 92.2.2)
- purchase of equipment for protecting crops (excluding preparations for plant protection and pest control - cf. 78), such as detonators, anti-hail covers, anti-frost smoke, etc.

## 83. Services

This heading includes:

- Rental paid, either directly or as a component of a tenancy agreement, for the business use of non-residential buildings and other capital assets, e.g. hire of machines and implements without operating staff (cf. 10). It should be recalled that payment for the hire of machines and implements including the operating staff does not belong to intermediate consumption, even though it may be regarded as such by individual farmers. It is in fact "Contract work at the agricultural producer stage", falling under agriculture (cf. 38.7.3.2).
- Fees for workers' medical examinations necessitated by their employment.
- Fees for veterinary surgeons. Since veterinary surgeons' fees normally include payments for medicines administered, the cost of such medicines will be entered automatically under this heading and not under "Pharmaceutical products" (cf. 79).
- Fees for agricultural consultants, surveyors, accountants, tax consultants, lawyers, etc.
- Purchases of services of scientific research, market research and advertising.
- Expenditure on services provided by transport, trade and storage enterprises. These include, in particular, cost of intra-agricultural exchange for seed, fodder and livestock, they are the costs incurred by the exchange of these products, including that effected through the trade (cf. 16.1, 81.3 and 74.3)
- Postage and telephone charges incurred in the performance of work.

- The service component contained in the gross premiums of insurance taken out to cover operating risks such as livestock losses, damage to crops by hail, frost, fire and gales, etc. (The remainder - i.e. the net premium - is the component of the gross premium paid which is available to the insurance companies for settling claims. That part of the net premium which relates to the insurance of fixed capital items is accounted for in the EAA under "depreciation" (cf. 122.2); the balance, covering all other items, appears in the distribution of income account and is ignored in the EAA).

The division of gross premiums into the two components can only be done with any accuracy for the economy as a whole, as is done within the scope of national accounts. The distribution of the service component between branches is generally undertaken in connection with the establishment of input-output tables, with the aid of suitable key values. Reference should therefore be made to national accounts when completing this item in the EAA.

- Cover charges
- Bank charges (but not interest for bank loans)
- Subscriptions to professional associations, such as membership fees for Chambers of Agriculture
- Subscriptions to agricultural cooperatives
- Expenditure on milk inspection, shows, and entries in pedigree registers
- Expenditure on artificial insemination and castration
- Reimbursement for travelling, separation and removal expenses incurred by employees in the course of their duties primarily in the employers' own interest and payments to autonomous transport enterprises which convey employees for the account of the employer (cf. 74.2, 85 and 124.1.f). If, on the other hand, transport is effected with own staff and own transport, the costs incurred must be entered under the appropriate headings. (Since purchases of goods are to be entered "free at farmgate" and sales "ex-farmgate" no separate costs for the transportation of goods are involved - cf. 155, 152.1).

85. On the other hand, intermediate consumption does not include:

- Goods and market services which producer units provide to their employees at no cost or at a reduced rate, insofar as this expenditure is effected clearly and primarily for the benefit of the employees. The value of these goods and services forms part of compensation of employees (cf. 124.1).
- Travelling allowances paid by the employer in cash to his employees; these belong to compensation of employees. (The employee then uses this money to pay for transport between his home and place of work.) (cf. 124.1).

Payments made by the employer direct to a transport enterprise for the collective transport of workers do not, however, count as compensation of employees but as intermediate consumption (cf. 74.2).

This difference in recording transport services is based on the assumption that the payments to employees are primarily effected in the interest of the employees themselves, whereas transport arranged by the employer represents a special interest of the employer.

- Purchases of works buildings and movable assets (i.e. equipment whose normal useful life exceeds one year); these are considered as gross fixed capital formation (cf. 92.1).
- Expenditure for the restoration (for maintenance, cf. 82) of fixed capital goods (e.g. reconstruction of roofs and gutters, and electrical and heating installations in works buildings) and expenditures on the improvement and repair of movable capital goods which are intended to prolong their normal useful life or increase their productivity; these expenditures are considered as gross fixed capital formation (cf. 92.2).

- Purchases of services connected with the acquisition of ownership of buildings and other existing fixed capital goods (excluding breeding, stock, dairy animals and draught animals - cf. 81.4), such as fees for agents and solicitors and entries in the land register; these are considered as gross fixed capital formation (cf. 92.4).
- Rents paid for the use of land; these are shown under "Rent and other payments in cash or kind" (cf. 133).
- Expenditure on the use of dwellings; this is private consumption and is not shown in the EAA.
- Patent fees; these are shown in the distribution of income account.
- Services of production factors; these are included in the value-added.
- Wear of capital goods; this is expressed as consumption of fixed capital (cf. 122).
- Net insurance premiums (cf. 83, 122.2).
- The premiums for personal injury, illness and accident insurance; these are considered as distributive transactions.
- Water rates paid purely as a tax and unrelated to the quantities of water consumed.

#### **D. GROSS CAPITAL FORMATION** (cf. ESA 336-346)

87. Gross capital formation, as a component of the final use of the domestic product, is sub-divided into:

- gross fixed capital formation and
- changes in stocks.

##### **1. Gross fixed capital formation**

88.1. The gross fixed capital formation of an economy should be interpreted as meaning that proportion of the gross domestic product produced during the reference period which is intended to be used for a period of more than one year as means of production in the production process. (As distinct from the final consumption of private or public households, exports and changes in the volume of stocks). The definition is important since it implies that the following goods are not to be considered as economic capital formation:

- goods which are not produced, such as land (cf., however, 93)
- goods which were produced at some time in the past and which have, therefore already once constituted part of the domestic product but which are now put to another use in the reference period. A change of use or ownership obviously does not mean that such goods become part of the domestic product a second time. To avoid duplicate counts, transactions of this type receive special treatment: they are recorded as net purchases of reproducible existing capital goods in heading 980 of Table 4 of the EAA and EAF.

88.2. The purchase of already existing (and hence not new) durable capital goods does not count as gross fixed capital formation from the national economic viewpoint, since these goods have already been included once in the national product at an earlier date, at the time of their completion. Sales of already existing goods from the capital assets of individual producer units to other producer units, who in their turn transfer these goods into their own capital assets, do no change in any way the total volume of stocks of capital assets of the economy as a whole. It is, however, important to take such transactions into account in an analysis by branches or sectors.

88.3. If the change of ownership results in a different use (i.e. no longer as capital assets), the stocks of capital assets of the economy as a whole are reduced: disinvestment occurs. The commonest instances of this are motor vehicles which households buy secondhand from producer units, shipping which is sold secondhand to other countries, and also capital goods which have been broken up and are put to some intermediate use. Since the new use in these cases forms part of the domestic product (as private consumption, or as exports, or any other category depending on the type of goods manufactured from the scrap iron) the gross fixed capital formation must be reduced correspondingly. The ESA's concept of net purchases of reproducible existing capital goods is therefore used in the calculation of gross fixed capital formation, and this heading provides allowance for removals from stocks of capital goods and disinvestments.

88.4. It is theoretically possible for net purchases to be positive, i.e. represent additions to the capital assets of the economy as a whole. This is the case, for example, when motor vehicles which were included in the domestic product in an earlier period as final consumption are purchased in used condition for use as capital assets.

88.5. Since sales of reproducible existing capital goods normally exceed purchases, net purchases are thus negative for the economy as a whole. If, however, the gross fixed capital formation of the economy is analysed in a break down by branch of use, net purchases can be positive for individual branches. (In the analysis of transactions involving existing durable capital goods in the accounts and tables of the branches in the ESA, only the balance of purchases and sales is shown, since it is only this that is significant for measuring capital formation).

89.1. Fixed capital formation occurs in agriculture whenever landlords or tenants of agricultural holdings purchase capital goods (as defined in 92) for use in the agricultural production process. The criterion is that of the transfer of ownership and not of the use of the goods (cf. 89.2)

Objects acquired by long-term leasing (but not short-term hiring) are treated in the same way as purchases. Reservations of ownership in the event of credit purchases are disregarded.

89.2. Whether or not this principle can always be followed will depend on the initial statistical material used for the calculations. If information is provided by purchasers, there will in theory be no difficulties (apart from the difficulty in practice of recording all investors).

Often, however, (and this is particularly true of agriculture), it is information from producers of capital goods on their output or sales which is used as the basis for calculations. Quite apart from those cases where it is not clear whether a product belongs under the heading of capital goods or not, it is then difficult to determine the actual purchaser since the nature of the capital goods tends rather to indicate the user. In agriculture, therefore, there is the risk that capital goods recorded in the branch may also include those which were acquired not by agricultural enterprises but by commercial enterprises for the purposes of hiring without operating staff.

90. Accrual of new capital goods is always expressed in gross terms, i.e. not reduced by fixed capital consumption (cf. 122). Fixed capital consumption is, however, generally calculated. Deducting fixed capital consumption from gross capital formation gives the net capital formation.

91.1. Normally, as a result of their use in the production process, goods forming capital assets become subject to wear and a decrease in value results; when worn out, they lose all value. The evaluation of this depreciation of capital goods is the consumption of fixed capital. When the capital assets are livestock, the situation is different in that no real decrease in value results from using livestock in the production process as draught animals or animals for breeding or supplying milk. Calculation of fixed capital consumption is therefore unnecessary. Once the animals reach the end of their useful lives they are removed from capital assets and valued as livestock for slaughter.

If animals thus removed are replaced by an equal number of younger animals, livestock capital assets will remain constant in terms of numbers and value. From the national economic viewpoint, therefore, no new capital formation takes place through the continuous replacement of old animals by young ones.

Thus transfers of animals into or out of capital assets are considered as gross fixed capital formation or disinvestment only when the existing volume of assets changes. Only the balance, i.e. additions to the volume of livestock assets less removals from these assets (for slaughter or some other final use such as export) is therefore considered as gross fixed capital formation (or disinvestment) in the national economic sense. Similarly, the own-account produced livestock assets to be shown in the EAA (both in the current and fixed capital formation accounts) also represent only the balance of new additions less removals, and the figure given is a net value.

91.2. Similar consideration to those for livestock apply in the cases of new plantations and the afforestation of new areas and conversions. Here, too, consumption of fixed capital progressively through time is assumed to be zero and entries in both the current and fixed capital formation accounts are made only in respect of net changes in area (cf. 92.3.2), since only new plantations increasing the existing total stocks of an economy count as gross fixed capital formation.

If an economy's volume of stocks of orchards, vineyards, forest areas, etc. decreases (possibly despite new plantings, afforestation of new areas and conversions), there is disinvestment here also.

91.3. In these cases (cf. 91.1 and 91.2), since annual consumption of fixed capital is assumed to be zero, the value of net capital formation is always the same as the gross value.

## 92. Components of gross fixed capital formation

Details of what is considered as gross fixed capital formation are as follows (1) :

(a)

92.1.1. New durable goods, each worth at least 100 units of account at 1970 prices, bought on the market or produced by producer units during the relevant reference period and intended to be used, for a duration of more than one year, in the production process.

These include, in particular:

(aa) Immovable fixed capital goods:

- Farm buildings (= non-residential buildings) (head. 961) (2)
- Other construction works, e.g. road and dyke building, fences (head. 971 or 973).

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(1) The numbers in brackets indicate the relevant headings in Table 4 of the EAA or the EAF.

(2) In the sub-sector "Agriculture", residential buildings are included. In recording under the branch concept, on the other hand, all residential buildings existing within an economy are grouped together in a separate branch 850 ("letting of immovable goods by owners") of NACE/CLIO.

(ab) Movable fixed capital goods:

- Vehicles (head. 950)
- Machinery and other equipment (head. 930)
- Changes in numbers of livestock (1) (head. 920) in respect of:
  - ) Breeding animals (but excluding breeding fowls)
  - ) Dairy animals
  - ) Draught animals

92.1.2. The purchase or own-account production of durable goods needed for an initial installation is considered as gross fixed capital formation even if the value of each individual good is less than approximately 100 units of account at 1970 prices, provided that their total value exceeds this fixed minimum threshold.

For example, the stock of bottles in a brewery or wine growing enterprise (excluding non-returnable bottles) represents a capital asset even though the value of a single bottle is insignificant. The same applies to chairs and tables, crockery and cutlery in hotels and restaurants and to tools in enterprises. Initial equipment with such goods represents fixed capital formation. In these cases, however, fixed capital consumption is not calculated, since it is assumed that the stock, once acquired, will always be maintained by current purchases to replace items which have become unusable or lost. Current replacement purchases are recorded as intermediate consumption. Although clear enough in theory, this rule is less easy to implement in practice, since statistical data on output and sales do not always make it obvious whether the goods concerned are purchased as initial equipment or as replacements.

(b)

92.2.1. Goods and services incorporated into existing fixed capital goods for the purpose of

- improving them
- rebuilding or reconstructing them
- prolonging their useful life or increasing their productivity.

These are recorded with the capital goods into which they are incorporated.

92.2.2. This heading includes all goods and services which are incorporated into fixed capital goods for purposes other than their current maintenance. Current maintenance is taken to mean all services which, in comparison with the normal lifetime of the capital goods, must be repeatedly provided at relatively short intervals in order to maintain the goods in serviceable condition. It relates, for example, to the replacement of fast-wearing components of capital goods, external and internal painting, etc. The magnitude of the sums expended for this purpose is in no way a criterion for determining whether a service creates an asset or represents current maintenance, since in the case of capital goods of high value, services for current maintenance may also be very costly. Strictly speaking, the allocation of services performed on existing fixed capital goods either to the "current maintenance" category or to the "gross fixed capital formation" category should be determined by the interval which will elapse before the service has to be repeated e.g. the replacement of parts which normally wear out within one year, such as the tyres of a motor vehicle, counts as current maintenance, whereas the replacement of an engine constitutes fixed capital formation, not because the value is higher but because an engine does not normally have to be replaced annually but only after several years. Recording a service of this kind under the assets heading (i.e. treatment as fixed capital formation and not as current maintenance) makes it possible to distribute the value uniformly over the entire period of use through the device of fixed capital consumption.

(1) Cf. 98 for recording changes in the numbers of other animals as "Changes in stocks".

In this context the ESA specifies that replacement or spare parts count as gross fixed capital formation if they are worth more than approximately 100 units of account in value at 1970 prices, have a service life of more than one year, and are not subject to regular renewal.

(c)  
92.3.1. Goods and services incorporated in land. These constitute expenditures on improving the land and preparing it for other productive uses, excluding the costs of current maintenance (cf. 92.2.2). It is stipulated that these expenditures must be effected by farmers (landlords or tenants) or that their result must become their property.

They include, in particular:

(ca) Expenditure on clearing, levelling, draining and irrigation entered under "Land improvements" (head. 973) for agriculture, and under "Other construction works" (head. 971) for forestry; expenditures on regrouping of holdings of land - shown under "Other construction works" in both cases (head. 971).

Costs are only incurred in the form of civil engineering works.

(cb) Expenditures on pioneer afforestation (e.g. of waste land and marginal yield land); by convention, in addition to the costs of planting (= plantation costs), the costs of subsequent improvement and tending of plantations (over the first five years) are also taken into account; expenditures on the conversion of low-yield coppice into high forest (head. 919).

(cc) Expenditures on planting new orchards, vineyards, hop-fields, berry and Christmas tree plantations, and asparagus beds; by convention, in addition to the costs of planting, the costs of maintenance (over the first three years) are also taken into account (head. 910).

92.3.2. It should be noted (cf. 91.2) that in the case of the types of capital formation listed under 92.3.1 (cb) and (cc), only those net new assets which enlarge the capital assets of the economy are recorded. New assets which exactly replace others lost from stocks are not included in gross fixed capital formation. However, in both these cases all expenditures incurred are entered as intermediate consumption. In the former, the expenditures give rise to the capital formation, while in the latter intermediate consumption performs the function, as it were, of fixed capital consumption.

92.3.3. When the net change in numbers of "capital account" livestock (cf. 92.1.1), or in areas of those capital goods mentioned in sub-para cb and cc of 92.3.1 above, is negative disinvestment has occurred. In these cases, there should be equal negative (value) entries in the formation of fixed capital account and in the current account (in the cell at the intersection of the column "Own account produced fixed capital goods" with the appropriate livestock row, or at its intersection with the row "New plantations" as appropriate). The value of any output resulting from the disposal of the products of the net areas cleared, and from the livestock removed from the breeding herds etc. will need to be entered in the current account, as will the costs of clearing etc.

The negative evaluation referred to above should be assessed on the basis of replacing, at manufacturing cost prices (cf. 140.1 and 153.2), the net decrease in the numbers of livestock or areas of forests, orchards etc. including, in the latter cases, the maintenance costs of the first 5 or 3 years respectively (cf. 92.3.1 sub-para cb and cc).

When, however, the net decrease in the areas of orchards, vineyards (and the other items listed in sub-para cc above) contains any derelict (or commercially non-viable) areas, the loss of capital for such areas should be regarded as zero.

(d)

92.4. Costs incurred in the transfer of ownership of land, buildings and other existing fixed capital goods (excluding breeding livestock, dairy animals and draught animals - cf. 81.4) and intangible assets. These are included with the individual capital goods concerned, except as regards costs incurred in the transfer of ownership of land which are recorded under "Miscellaneous" (head. 981).

They include the value of the services rendered by lawyers, estate agents and other intermediaries, together with any duties and other taxes (except VAT for which cf. 145 to 147), payable in connection with such transfers. If they relate to new goods, these costs are already included in the value of the fixed capital goods measured at purchasers' prices. If they relate to existing goods, these costs constitute the only production taking place during the relevant period which has an effect on the national product and are treated as a component of gross fixed capital formation.

93. Net purchases of land (head. 985)

Net purchases (acquisition less disposal of land) do not belong to gross fixed capital formation. This concept is treated in the ESA only from the national economic standpoint. Transactions in land are of no importance for measuring the overall performance of an economy, since land is not produced; it exists by the nature of things (It should be noted that land reclamation, e.g. by dyking, does not constitute the production of land but construction services which are taken into capital assets - cf. 92.1.1). Transactions in land are therefore in no way an output service and cannot form part of the national product. From the national economic point of view, net purchases of land can be disregarded.

On the other hand, the recording of transactions in land is of use for calculating the changes in assets of the individual sectors and sub-sectors. Transactions involving land should be recorded at the same value for both buyer and seller in order to exclude the costs of the transfer of ownership which are recorded under "Miscellaneous" (head. 981) (cf. 92.4). The item is of particular and increasing importance for agriculture (as net outflow), and has therefore been incorporated in Table 4, although this is not strictly correct in the sense of the ESA. Net purchases of land in the ESA are recorded by sub-sectors, not by the branches, since the ESA regards it as meaningless to analyse these flows for units of homogeneous production.

94.1. The following goods and services are not included in gross fixed capital formation:

- (a) Small tools, working clothes, spare parts and equipment of small value (less than 100 units of account at 1970 prices) even if they have a normal life of more than one year (cf., however, 92.1.2); because they are renewed regularly, and to conform with business accounting practice, purchases of these goods are treated as intermediate consumption (cf. 82).
- (b) Durable goods acquired by households for the satisfaction of their domestic wants; as these goods are not used for purposes of production, they are treated as final consumption.
- (c) Services of scientific research, advertising, market research, etc.; purchases of these services are included in intermediate consumption (cf. 83)

94.2. The value of fixed capital goods which are used simultaneously for commercial and private purposes (e.g. motor vehicles) is allocated proportionately between fixed capital formation and private consumption according to their distribution between the two types of use.

95. In the case of construction, or equipment whose production extends over several reference periods, it is necessary to specify whether the value of the work carried out during a given reference period should be recorded in the accounts under gross fixed capital formation or as a change in stocks:

- In the case of immovable fixed capital goods (farm buildings, other construction works), the value of the work carried out during any reference period is treated as gross fixed capital formation.
- In the case of movable fixed capital goods (vehicles, machinery and other equipment), it is not until the reference period in which purchase or other acquisition is effected that capital formation arises. The value of the work carried out during preceding reference periods is treated as changes in stocks for the producers of the goods.

96.1. In Tables 0 and 1, own-account produced fixed capital goods include only:

- Any net change in the numbers of the following categories of livestock reared on own holding:
  - Breeding animals (but excluding breeding fowls)
  - Dairy animals
  - Draught animals
- Any new change in the area of:
  - Orchards, vineyards, hop-fields, berry plantations, asparagus beds and Christmas tree plantations and forests (by the afforestation of new areas and conversions) (cf. 92.3.1).

96.2.1 For own-account produced orchards, vineyards, hop-fields, berry plantations, asparagus beds and Christmas tree plantations, the following entries apply:

- (a) In the calculation of their value of output (Table 1)
  - (i) at the intersection of the row "New plantations" with the column "Own-account produced fixed capital goods", one overall amount representing:
    - compensation for the use of factors of production
    - the sum of the intermediate consumption goods bought in and consumed for production
    - the value of fixed capital consumed due to the use of capital goods
    - any taxes linked to production
  - (ii) at the intersection of the row "Nursery products" with the column "Own-account produced fixed capital goods", the transplants used, insofar as they are not bought in through the trade. (If transplants are bought in through the trade, they are a component of the bought in intermediate consumption goods already mentioned)
- (b) in the calculation of intermediate consumption (Table 2), the values of the individual intermediate consumption goods used. (In the case of agricultural products, only those products bought in to the "national farm" through the trade)
- (c) in the case of gross fixed capital formation, under the heading "New plantations", the value obtained by totalling the amounts shown in the column "Own-account produced fixed capital goods" in Table 1 which relate to the new plantations (i.e. the entries referred to in (a) (i) and (ii) above.

96.2.2. For afforestation of new areas and conversions, entries are to be made in the EAF on a similar basis.

## 2. Changes in stocks

97.1. Stocks consist of all goods, other than fixed capital goods, held at a given moment of time by producer units.

97.2. Stocks are sub-divided into:

- Input stocks, i.e. stocks of primary products (raw materials and auxiliary and working materials) for use in the production process. Consumption of these input products is normally calculated by adjusting purchases (or acquisitions) by the changes in stocks over the reference period (cf. 45.1) and the latter are, therefore, shown separately in Table 2 "Intermediate consumption".
- Output stocks, i.e. stocks of finished and semi-finished products from own production. These are taken into account in calculating output, i.e. entered in the appropriate columns of Tables 0 and 1. Output stocks comprise:
  - harvested crops
  - olive oil, grape must and wine
  - livestock raised for slaughter
  - all chickens and other fowl (including breeding fowls)
  - other livestock except those treated as fixed capital.

98. Stock changes of straight feedingstuffs (e.g. cereals, hay, silage, fodder roots etc.), should be recorded as part of the final production of the relevant commodity on the output side of the EAA if they have not left the national farm. If, however, under the change of legal ownership principle (cf. 16.1), they have appeared both as output and input in the EAA, then the stock change should be used, as in 97.2, to correct "purchases" to "consumption" on the input side.

99.1. Stocks of goods do not include reserves of natural resources, standing timber or standing crops; these stocks enter into the economic system only from the time when the resources are exploited, the timber felled or the crops harvested (cf. 43.2.1).

99.2. This ruling is of particular importance for agriculture. If harvesting takes place in a different reference period from the work of soil preparation and sowing, an accounting loss will be recorded in the period in which the costs have been incurred, whereas an accounting profit will be shown in the period when the crops are harvested. This consequence is unsatisfactory, but follows of necessity (even when financial years are used as the reference period) from the ruling that only harvested crops shall be treated as output, and not those which are in the soil or standing.

It can, however, be accepted, since if conditions in agriculture remain similar from year to year, an approximate balance will be established to the extent that the expenditures in a given reference period will be offset in that same period by the corresponding profit from the sale of the previous harvest. Only when there are substantial changes in production levels (e.g. in the event of a serious harvest failure) will this balance not be achieved.

99.3. or forestry, on the other hand, with its long production process which frequently extends over generations, and the high value of forests, this provision is unrealistic. However, as no practical solution has yet been found to the technical problems of recording standing timber, the ruling of 99.1 must remain in force.

100. Services do not form part of stocks, except for those which are included in the value, at purchasers' prices, of goods put into stocks.

101. The question of whether, in the case of construction of buildings, etc. and equipment where production extends over several reference periods, the value of the work carried out during a given period should be recorded in the accounts under change in stocks or under gross fixed capital formation has already been discussed in connection with capital formation (cf. 95).

## APPENDIX

### The recording of livestock either as fixed capital formation or as changes in stocks

102. As explained under 92.1.1 and 97.2, changes in the volume of stocks of livestock (for the purposes of agricultural statistics) are allocated either to fixed capital formation or to changes in stocks depending on the type of animal.

#### 103. Livestock imported for investment purposes i.e. breeding animals (excluding breeding fowls), dairy animals and draught animals

If such animals, at the time of importation from outside a "national farm" can clearly be identified as fixed capital for use as specified above, then they are recorded exclusively as formation of gross fixed capital in Table 4. The fixed capital formation of agriculture only includes, of course, animals acquired for agricultural purposes, and not, for example, saddle horses for private use or animals procured for some other use.

#### 104.1. Livestock for rearing or fattening

All imported animals which at importation are not clearly identifiable as fixed capital should be recorded initially as intermediate consumption in Table 2. They will then appear as final stocks in Tables 0 and 1 at the end of each reference period until they are slaughtered or otherwise disposed of. If, at any time, they are transferred to the breeding herds or flocks, or to the dairy herds, or for use as draught animals, then the net change in numbers should be recorded in Tables 0, 1 and 4 (but cf. 91.1) as own account fixed capital goods produced during the reference period in which the transfer takes place.

104.2. The same accounting treatment is given to animals bred and reared within a national farm which are subsequently transferred to the breeding herds etc. or for use as draught animals.

104.3. Net additions to, or subtractions from, the inventory of breeding or draught animals, other than direct imports (cf. 103), are entered on the appropriate rows of the "Final Production" table in the column "Own-account produced fixed capital goods" valued as described in paragraph 154.4. Input costs will have been recorded in the "Intermediate Consumption" table over the life of the animal up to the time that it is regarded as entering the breeding herd etc.

105. Livestock imported for immediate slaughter are recorded as imports of domestic abattoirs and are not entered in the EAA, which is confined to the analysis of the output of domestic agriculture.

106. Movements of livestock within the national farm and inter-farm sales effected through the trade. The only entries necessary are in respect of the costs incurred, particularly the "costs of intra-agricultural exchange" (trade margins, transport costs and in some cases veterinary fees), these are recorded as intermediate consumption under the heading "Services" (cf. 16.1, 81.3 and 81.4).

108.1. Non-farm animals (racehorses, saddle-horses, dogs, cats, cage-birds, etc., zoo and circus animals, etc.) are also included as output of the branch ("wherever they are produced"), if they are produced for commercial purposes. The breeding and rearing of these animals, wherever it occurs, is regarded as taking place in branch 01. If, however, these animals are reared without commercial intent they do not form part of the output of goods and so do not belong to branch 01.

108.2. The sale of such animals may be effected

- to private households. Any further transactions involving these animals will then cease to concern the EAA. In private households, purchases of these animals are shown as private consumption and not as inflow to capital assets (even in the case of a particularly valuable saddle-horse), since by convention households in their capacity as consumers cannot form any fixed capital assets;
- to other branches. In this case a guard dog, circus animal or racehorse, for example, becomes a capital asset of the branch which purchases it.

108.3. In the case of zoo and circus animals, the transfer to the branch which will use them may normally be regarded as occurring immediately after birth and an imputed delivery from branch 01 should therefore be recorded at that stage.



## IV. DISTRIBUTIVE TRANSACTIONS

### **A. ITEMS TO BE RECORDED**

114.1. Distributive transactions are the means by which

- the value-added by resident producer units and factor income originating from the rest of the world are distributed;
- income and wealth are redistributed (ESA para. 401).

114.2. The present handbook, however, which is concerned only with the branch accounts for agriculture and forestry, does not cover all distributive transactions, but only those which are linked to the production process proper. This excludes the great majority of distributive transactions (particularly income from land, dividends and other income distributed by corporate enterprises, withdrawals from the entrepreneurial income of quasi-corporate enterprises, current taxes on income and wealth, etc.). For these, only recording by groupings of institutional units, i.e. sectors or sub-sectors, is possible for statistical reasons and meaningful for analytical purposes (cf. 5).

### **B. GENERAL RULES**

#### **1. Reference period**

115. The reference period for the EAA and the EAF should be the calendar year

#### **2. Data on values**

116. Values should be shown in millions of national currency (Italy: milliards of lire), to one decimal place.

#### **3. Time of recording**

117.1. Basically, distributive transactions are recorded at the moment when payment becomes due. Nevertheless, for certain transactions it is difficult to specify the moment when an amount becomes due and there are grounds for recording such transactions at the moment when payment is actually made or, failing this, the moment when benefits are actually provided (ESA para. 708).

117.2. For individual items, the following rules apply as regards the time of recording:

##### 117.2.1. Compensation of employees:

- gross wages and salaries are recorded at the moment when they are due
- employers' social contributions are recorded at the moment when the wages and salaries to which they are related are due, not at the moment when these sums are actually paid.

##### 117.2.2. Taxes linked to production and imports

These are recorded during the reference year (or years) at the moment when they are actually paid.

### 117.2.3. Subsidies

These are recorded in the reference year (or years) when payment is actually made.

### 117.2.4. Rent and other payments in cash or kind

These are recorded at the moment when they become due.

### 117.2.5. Interest payments

These are recorded at the moment when they fall due. Even if interest relates to several accounting periods, it is not necessary to distribute it among the different periods.

## C. VALUE-ADDED

### 1. General comments on the calculation of value-added

118. Value-added is the result of the production activity of an economy or of one of its sub-branches within a specified period. It is derived as the difference between the value of output and intermediate consumption, and it is immaterial for this whether the value of output is defined as total output, final output or usable output, since intermediate consumption changes accordingly. Value-added is a standard measure for assessing the productivity of an economy or of one of its branches.

119. Value-added may be shown in the accounts both gross (gross value-added at market prices) and also net (net value-added at market prices), i.e. before or after the deduction of consumption of fixed capital.

120. If taxes linked to production are deducted from value-added at market prices and subsidies are added on, value-added at factor cost is obtained. This also is shown in the EAA and the EAF both gross and net. Net value-added at factor cost represents the income from factors of production.

121. The relationship between value-added at market prices and its components can be represented as follows:

- (1) gross value-added at market prices
- (2) consumption of fixed capital
- (3) net value-added at market prices = (1) - (2)
- (4) taxes linked to production
- (5) subsidies
- (6) gross value-added at factor cost = (1) - (4) + (5)
- (7) net value-added at factor cost = (3) - (4) + (5) = (6) - (2)
- (8) compensation of employees
- (9) net operating surplus = (7) - (8)

### 2. Consumption of fixed capital

122.1. The ESA is a system comprising yield-and-consumption accounting, not receipts-and-expenditure accounting. It is therefore necessary to eliminate from the general operating expenditures those which are not connected with the consumption of the given reference period, such as expenditures on fixed capital formation (cf. 88). Instead of actual expenditures on fixed capital formation in a particular reference period, consumption of existing fixed capital in that period is calculated and used.

Consumption of fixed capital is an expression, in terms of value, of the consumption of the means of production used in the production process. Where the means of production have a service life longer than one year, consumption of fixed capital is used to express, in terms of value, the amount of fixed capital used up in the production process during a given reference period as a result of normal wear and tear and foreseeable obsolescence. If on the other hand, the means of production used have a service life of less than one year, the accounting entry is made under intermediate consumption (cf. 92.1, 94.1).

Although consumption of fixed capital represents a form of intermediate consumption, it is treated as a component of gross value-added (cf. 121).

122.2. Appropriate reserves must be included in consumption of fixed capital in order to cover the risk of loss of capital goods as a result of accidental damage. The amount to be entered should be the net premiums (1) paid in respect of the capital goods insured.

122.3. Consumption of fixed capital must be calculated for all reproducible fixed capital goods, with the exception of those goods

- which have an indeterminate lifetime, such as agricultural and forest roads, drainage and irrigation works. (The value of such goods is assumed to remain constant as a result of continuous maintenance and repairs);
- which represent blocks of capital, such as orchards, vineyards, etc., forest stands or capital account livestock; in these cases it is assumed that no gradual decrease in value occurs as a result of the use of these capital goods, but rather that after a certain age is reached a proportion of these fixed capital goods is removed abruptly from the total volume, which is, however, normally kept constant by the replacement of the proportion removed, e.g. by new plantings or by the transfer into the breeding herds etc. of young (capital) animals. If a complete balance is not established, there is disinvestment (cf. 91.1 and 91.2).

122.4. In contrast to depreciation allowed for tax purposes or depreciation shown in the internal accounts of an enterprise, consumption of fixed capital within the ESA must be based on the current replacement prices of the stock of fixed capital goods for the reference period in question. "Current replacement prices" are to be interpreted as those prices which farmers need to pay in any given reference period for new machinery or equipment to replace, as closely as possible, an existing item. This approach is necessary for the correct calculation of the gross domestic product, e.g. to avoid recording false profits in an inflationary trend.

122.5. The percentage to be written off in any reference period for any category of capital goods should be a constant and equal to  $100/n$  where  $n$  is the "normal economic lifetime" of that category expressed in years (for any category of capital goods,  $n$  may vary within a country over time, and between countries).

122.6. The effect of the use of current replacement prices and fixed percentage "write-offs" is that unless acquisition prices remain unchanged over a normal economic lifetime, the values written off will vary from year to year.

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(1) Net premiums are the gross premiums less the cost of the services provided by the insurance company (cf. 83).

### 3. Compensation of employees (cf. ESA 406-413)

123. The compensation of employees includes all payments in cash and in kind made by the employers as remuneration for the work done by their employees during a given reference period. These payments cover:

- gross wages and salaries
- employers' social contributions.

124.1. Gross wages and salaries include the following individual elements:

- (a) basic wages and salaries paid directly
- (b) goods and services supplied free or at reduced prices to employees for their own consumption (payment in kind); these also include:
  - the rental value of accommodation made available to them at reduced prices or free of charge
  - the leasing value of land made available to them at reduced prices or free of charge
- (c) enhanced rates of pay for overtime, nightwork, weekend work, work under difficult conditions, etc.
- (d) cost-of-living allowances
- (e) extra payments such as Christmas, New Year and annual holiday bonuses; bonuses based on productivity; standby pay
- (f) allowances for transport to and from work (1)
- (g) holiday pay for official holidays or annual holidays
- (h) commissions, tips and attendance fees
- (i) bonus shares distributed to employees
- (j) payments made by employers to their employees under savings schemes
- (k) housing allowances paid in cash by employers to their employees.

124.2. It should be stressed that gross wages and salaries must be recorded, inclusive of taxes on income and church rates and any allowances for these, and also the share of social contributions payable by employees. Any net wages and salaries which may be agreed between employers and employees must therefore be increased by these items.

Some of the items listed above are of particular importance for the EAA. In addition to the basic wages paid directly, this is true above all in the case of payment in kind, i.e. goods and services supplied free or at reduced prices to employees. It should, however, be noted here that, in the case of goods and services supplied to employees at reduced prices, it is of course not the full value of the goods and services but only the difference between this full value and the reduced value paid by the employee which is considered as part of the employee's remuneration. Valuation should be based on ex-farm or roadside pick-up prices (cf. 151).

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(1) Payments made primarily in the employer's interests should not be recorded here. They are considered as intermediate consumption (cf. 74.2).

124.3.1. On the other hand, gross wages and salaries do not include expenditures by employers which are for their own benefit and are thus made in the interests of the enterprise. These include: allowances to or reimbursement of employees for travelling, separation or removal expenses incurred in the course of their duties; entertainment expenses incurred in the interests of the enterprise; and expenditures on providing amenities at the place of work (e.g. sporting and recreational facilities) (cf. 74.2).

124.3.2. Nor do cash payments made by employers to employees for the purchase of tools or working clothes (including contractual payments for such purchases) count as part of the gross wages and salaries to be recorded. These expenditures by employers are treated as intermediate consumption (cf. 82).

124.4. For the EAA, it is particularly important that no charge is entered for imputed wages of the enterprise holder and unpaid members of his family who help him.

125. Employers' social contributions consist of all payments made by employers to insurers for the benefit of their employees excluding, however, the amounts payable by employees which are deducted from the gross wages and salaries (cf. 124.2). These payments by employers cover statutory, contractual, conventional or other voluntary contributions in respect of insurance against the risks of sickness, maternity, disability, unemployment, industrial injuries, occupational diseases and the like and for old age and survivors' pensions. Although these employers' contributions are paid not to employees but directly to the insurers, they are treated as a component of the compensation of employees since otherwise the employees would simply receive them and then have to pay them over immediately to the insurers. The fact that employers pay these contributions plus the employees' share of the contributions directly to the insurers merely simplifies the procedure and, above all, ensures that the contributions are actually paid. The contributions themselves (both employers' and employees' shares) are a component of compensation of employees.

#### **4. Taxes linked to production and imports (cf. ESA 414-420)**

126.1. According to the ESA (para 414), taxes linked to production and imports consist of compulsory payments which are levied by general governments or by the institutions of the European Communities on producer units in respect of the production and importation of goods and services or the use of factors of production. Producers are liable to pay these taxes irrespective of whether or not they operate at a profit. Taxes linked to production excluding value-added tax are shown in the branches or sectors (ESA 420) which pay them (payment criterion).

126.2. Accordingly, the payments listed below are always counted as taxes linked to production if the following conditions are met :

Payments which are levied in respect of production or the use of factors of production,

- (a) which are clearly compulsory and
- (b) are paid directly by the 'Agriculture' branch
- (c) to general government or institutions of the European Communities.

Furthermore, by agreement, the following are to be regarded as taxes linked to production :

Payments

- (a) which are clearly compulsory,
- (b) which are levied by general government or the institutions of European Communities,

- (c) which represent taxes on products (1) and
- (d) are borne by agriculture;
- (e) but are not paid directly by the 'Agriculture' branch but by the user branch.

In these cases, it is assumed that the user branch is carrying out transactions on behalf of other units (ESA 215), i.e. for the tax authorities.

126.3. Owing to the varying historical development of public taxation in the member countries of the European Communities, numerous taxes linked to production exist which relate to very different sets of circumstances. Such taxes are also called indirect taxes, since unlike direct taxes they affect the individual not directly but via the cost of the goods purchased and the use of the factors of production at his disposal.

126.4. The most important element incurring liability to taxation is turnover. In all countries of the Community a turnover tax is levied in the form of value-added tax (cf. 145-147). The tax rates differ from country to country and are not even uniform within one country. Agricultural products are generally subject to a rate of tax below the norm. In agriculture, only two other taxes linked to production are of similar importance: viz. tax on land and buildings and tax on motor vehicles.

127.1. Taxes linked to production comprise all taxes and duties which are applied to productive activity. They are broken down into:

- taxes on products, i.e. taxes levied in proportion to the quantity or value of the goods and services produced or sold by producer units (e.g. co-responsibility levy on milk, sugar beet tax)
- other taxes linked to production, i.e. taxes applied to the uses of factors of production as well as any licences or duties necessary for the operation of the producer unit; this sub-heading includes compulsory duties, fees or contributions to costs paid by producer units to general government in respect of services provided by the latter as part of its administrative function, e.g. dyke and sluice charges and occasional payments such as fees for compulsory laboratory tests, driving licence fees, legal costs, etc. It also includes water rates paid purely as a tax and unrelated to the quantity of water consumed. (Water rates which do relate, directly or indirectly, to the quantities consumed are recorded under "Other items of intermediate consumption").

127.2. Costs incidental to the individual taxes, such as interest charged on arrears of tax due, and charges in connection with the assessment and collection of tax, are shown in conjunction with the taxes to which they relate.

127.3. Taxes linked to production do not include:

- Compulsory payments which are paid directly by the 'Agriculture' branch but not to general government or institutions of the European Communities. They are to be recorded under intermediate consumption of agriculture.
- Compulsory payments which are not paid directly by the 'Agriculture' branch but by the user branch and not levied by general government or institutions of the European Communities, but are borne by agriculture. They are to be recorded under intermediate consumption of the user branch.

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(1) Cf. 127.1.

- Taxes which are paid regularly on profits or wealth, such as income tax, corporation tax, tax balance levies or tax on assets. These are recorded as "Current taxes on income and wealth" in the distribution of income account;
- Inheritance tax, death duties and exceptional levies on wealth. These are recorded as "Capital taxes" in the capital account;
- Water rates related directly or indirectly to the quantities consumed.

128. Taxes linked to imports represent compulsory payments levied by general government or by the institutions of the European Communities on imported goods in order to admit them to free circulation within a country. These payments represent customs duties, levies on imported agricultural goods, value-added tax on imported goods (but cf. 129), monetary compensatory amounts levied on imported goods, and excise duties and any other consumption taxes affecting imported goods. They are payable by the importers and will usually be passed on to the purchasing farmer so that they will be included as part of the "acquisition price" (cf. 141.1).

Means of production are sometimes imported directly by agricultural producer units and when this occurs, any import duty, non-deductible VAT, and monetary compensatory amounts (receipts or payments) should also be reflected in the notional "acquisition price" used for the purposes of the EAA and EAF (cf. also 141.2).

129. Because entries in the EAA and EAF are now made exclusive of deductible VAT (cf. 146), the only turnover tax appearing in the accounts is non-deductible VAT (cf. 145-147). Except, therefore, in the special transitional circumstances described in 147.3, no VAT entries should be made in the accounts against "Taxes linked to production". This implies that any under or over compensation of VAT remains in the EAA and EAF either as a component of gross value-added at market prices, or gross value-added at factor cost, or both, depending on where the entries for over and under compensation are actually recorded in the account (cf. 147.3) i.e. these VAT entries are not removed as a tax linked to production when calculating gross value-added at factor cost from gross value-added at market prices.

## 5. Subsidies (cf. ESA 421-427)

130. Subsidies are current transfers which general government or the institutions of the European Communities make as a matter of economic and social policy to resident units producing goods and market services, with the objective of influencing their prices and/or making it possible for factors of production to receive an adequate remuneration (ESA 421). With the exception of grants to cover interest relief, which represents a special form of subsidy and will be dealt with later (cf. 131.3), subsidies are shown in the accounts and tables of the branches or sectors to which they are paid (payment criterion).

131.1. The most important characteristics of subsidies are as follows:

- (1) subsidies are current (1) (income) transfers (in contradistinction to capital transfers) made by the institutions of the European Communities or general government
- (2) the recipients of subsidies must be producers of goods and market services
- (3) subsidies are intended to lower the selling price of the goods produced by the recipients and/or make it possible for factors of production to receive an adequate remuneration.

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- (1) This does not, however, exclude single payments from being considered as current transfers, viz. if these payments represent income for the recipient and not an inflow to capital.

This last point should not be viewed too restrictively, since subsidies (in the sense of the ESA) can also be paid in circumstances where influencing selling prices or ensuring that factors of production receive an adequate remuneration are not necessarily the primary purpose. For example, financial aid may be provided in order to maintain agricultural and forestry production as part of a policy of land conservation, the primary purpose being either to make the region more attractive for the tourist trade or, alternatively, to protect the soil against erosion, regulate the natural water balance or influence the climate.

131.2. It is stipulated above that recipients of subsidies must be producers of goods and market services. Market services are all those services which can be bought and sold on the market and which are produced by a unit whose resources are mainly (i.e. 50% or more of the total current resources) derived from the sale of its output (whatever the price charged may be called) (ESA 307). This stipulation precludes all units producing non-market services from receiving subsidies, even if they produce goods as a by-product, such as the production of timber by state highways departments.

Output of market services also includes the services provided by the trade and by warehousing establishments. Subsidies can therefore also be paid to the trade and to market-regulating agencies, whose activities consist of the purchase, storage and re-sale of agricultural products (cf. Appendix on "Market-regulating agencies" at 137).

131.3. For the purposes of the EAA, the following are considered to be subsidies:

- All current transfers which general government or the institutions of the European Communities makes to private producer units producing agricultural products or timber. It is assumed that such transfers are always made as a matter of economic or social policy, i.e. for the purpose of influencing prices or ensuring that factors of production receive an adequate remuneration. Examples for agriculture are:
  - (a) The bonuses paid to farmers for denaturing bread cereals which count as subsidies to agriculture, irrespective of by whom or where the denaturing takes place, so long as the cereals remain the property of the agricultural recipient of the subsidy. If, however, the bread cereals are sold to a production stage (e.g. trade or market-regulating agency) and denatured subsequent to this, then, in accordance with the payment criterion, a denaturing bonus paid to this later production stage does not form part of subsidies to agriculture.
  - (b) The "deficiency payments" made to farmers in the United Kingdom are classified as subsidies. In this case the difference between the average market prices and the guaranteed prices of agricultural products is paid to producers of agricultural products by the government.
  - (c) Payments to farmers as compensation for products destroyed on the farm of origin (e.g. animal disease compensation, payments for the destruction of surplus production of crops, etc.) are to be recorded as subsidies. In this connection, it should be noted that any current transfers to farmers as compensation for animal disease should be recorded as subsidies in the current account whether the animals are "current account" or "capital account" livestock. The paradox of including payments in respect of capital account items in the current account is justifiable on grounds analogous to the accounting treatment given to healthy animals culled from the breeding herd or flock and then slaughtered. In this case an element of disinvestment occurs (which is recorded in the capital account), but later the market value received is included in the current account (cf. 92.3.3). When the diseased "capital account" animals are slaughtered, disinvestment also occurs. There may then be a reduced market value in respect of the hide or skin and other by products, or zero value if the animal is destroyed on the farm. The compensation payment can thus be regarded as making good the difference between the value realized and the potential value of a healthy animal.

- (d) Payments to farmers as compensation for losses of crops through extreme climatic conditions (e.g. drought, storm, etc.) are likewise to be recorded as subsidies.
- All current transfers which general government or the institutions of the European Communities make to public enterprises which are recognized as independent legal entities and which produce agricultural products or timber.
  - Current transfers made by general government to cover trading losses sustained by public producer units which produce agricultural products or timber and which are therefore classified to the agricultural or forestry branches, but which form part of an institutional unit included in the general government sector. In these cases, too, it is assumed that the losses are covered by general government as a matter of economic or social policy.
  - All grants to cover interest relief made for the benefit of units producing agricultural products and timber, even when they are intended to encourage capital formation. This is because these grants represent current transfers designed to alleviate producers' operating costs. In this way the selling prices of these units can be influenced and/or it can be made possible for factors of production to receive an adequate remuneration.

Grants to cover interest relief are recorded as a subsidy to the producers who benefit from them even if they are paid directly by the government to the credit institutions concerned. Thus, as an exception to the payment criterion, these subsidies are treated in the accounts as subsidies to the producers who actually benefit from them. It should be noted that when a grant serves the dual purpose of financing both the payment of interest on a debt and its amortization, and when it is not possible to apportion it between these two elements, the whole of the grant is treated as a capital transfer. This is because it is assumed that a grant of this nature is normally used for the amortization of debts arising from investments made in previous periods.

131.4. In contrast to most other branches, subsidies to intermediate consumption also play a role in agriculture. (Example: the subsidizing of farmers' consumption of diesel oil in the Federal Republic of Germany, the subsidy being paid not to the diesel oil producer but to the farmer).

In accordance with the payment criterion, subsidies allocated to intermediate consumption in agriculture and forestry, which are paid not to the producers of this intermediate consumption but to farmers and foresters, are recorded under these two branches, where they thus increase the "Subsidies" entry but do not lower the purchasers' prices of the intermediate consumption goods being subsidized. If, however, the producer of the means of production receives the subsidy, then of course, the situation is reversed and the purchase prices are lowered in the EAA and EAF.

131.5. The following are not treated as subsidies in the EAA:

- Current transfers which, although they represent subsidies as defined in the ESA, are not paid to agricultural producer units. These include, for example subsidy payments to market-regulating agencies. Although such payments possibly influence selling prices in agriculture and therefore benefit agriculture, in accordance with the payment criterion they must be recorded under the branch which is the recipient.
- Current transfers to agricultural producer units from a market-regulating agency. These should be recorded as part of the final production of the commodity in respect of which the transfer is made if the market regulating agency is concerned only with the purchase, sale or storage of goods. (If, on the other hand, the agency is concerned exclusively with the payment of subsidies, then the current transfers to producer units should be recorded as subsidies (cf. 137.1)).

- Current transfers from general government to households in their capacity as consumers. These are treated as social benefits or miscellaneous current transfers. The former category includes, for example, certain government aid for restructuring, such as financial aid for farmers changing their occupation.
- Investment grants. According to the ESA, these are capital transfers.
- Transfers made by general government to agricultural corporate and quasi-corporate enterprises to cover accumulated losses due to factors outside the control of the enterprise. These are treated as capital transfers.
- Compensatory payments made by general government or by the rest of the world (i.e. foreign countries and/or institutions of the European Communities), to owners of capital goods used in the production of agricultural or forestry products, which have been destroyed or damaged as a result of acts of war, other political events or natural disasters. Such payments (1) are recorded as capital transfers.
- The cancellation of debts which producers of agricultural or forestry products have incurred towards the government (resulting, for example, from loans advanced by the government to a non-financial enterprise which has accumulated trading losses over several financial years). The ESA also considers these as capital transfers.
- Exemptions from or reductions in taxes linked to production, income tax or tax on assets. Tax exemptions or reductions are not explicitly shown in the ESA system of accounts, and consequently not in the EAA or the EAF, since only taxes actually levied are recorded.
- Shares and other equities in agricultural corporate and quasi-corporate enterprises purchased by general government. These constitute not transfers but merely a change in the assets and liabilities of the general government sector and the sub-sectors agriculture and forestry, i.e. a financial procedure which is recorded in the financial account.

131.6. Owing to the concept of subsidies in the ESA (particularly the payment criterion), the EAA shows only a small proportion of the financial aid which benefits agriculture (namely, that proportion which corresponds to the ESA's definition of subsidies and which is paid to units producing agricultural products and timber). In addition to this, agricultural and forestry producer units also benefit from subsidies (within the meaning of the ESA) actually paid to previous or subsequent branches and, in particular, to market-regulating agencies.

#### **6. "Net operating surplus", "Rent", "Interest" and "Net income from agricultural activity" ("Net income from forestry activity" in the EAF)**

132.1. The "Net operating surplus" shown in Tables 3 of the EAA and EAF is calculated by deducting compensation of employees, taxes linked to production and consumption of fixed capital from gross value-added at market prices, and then adding subsidies (cf. 121).

132.2. In agriculture, this heading essentially comprises the remuneration arising from the use of land and capital together with the compensation for the managerial skills and work performed by the agricultural holder, and the work of unpaid members of his family who help him (for whom no charge for wages is made under the heading "Compensation of employees"). The distributive transactions which flow from these three factors of production viz. land, capital and the labour of the holder and his family are shown in Tables 3 as

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(1) These include payments compensating for the loss of orchards, vineyards, hop-fields, berry plantations, asparagus beds, Christmas tree plantations and forests, but not "capital account" livestock (cf. 131.3 sub-para (c)) compensatory payments for which should be entered as subsidies in the current accounts of the EAA and EAF.

"Rent and other payments in cash or kind", "Interest payments" and "Net income from family agricultural activity".

133.1. "Rent and other payments in cash or kind" are payments which users of land pay to the owners of that land in return for the right to make use of it.

The entries to be made in Tables 3 comprise the net rent of agricultural land (including the associated agricultural buildings) actually paid to the owners by producers of agricultural products. Net rent paid by tenants to owners of agricultural land who are themselves farmers of other land should also be included. However, only those payments which relate to any rental agreements of a duration of one year or more, are to be recorded: rents paid for shorter tenancies are to be omitted from the EAA and EAF since such tenancy agreements often limit the use of the rented land to specific purposes so that the transaction is best regarded as a type of inter-farm sale.

133.2. "Rent and other payments in cash or kind" does not include:

- The rental value of dwelling space situated within the buildings: this represents payment for a market service, which is a component of private consumption (i.e. the occupier pays the rental from his residual net income).
- The rentals paid for the business use of non-residential buildings (cf. 83).
- Depreciation of buildings.
- Expenses for the current maintenance of buildings (cf. 82).
- Land taxes (cf. 126.3).
- Expenses for insuring buildings (cf. 83).

Expenses for current maintenance, land tax and building insurance are not included in net rent because the ESA regards them as charges made directly against the user of the land, i.e. the tenant.

133.3. No rents are imputed for land and agricultural buildings used by the owner himself.

134.1. "Interest payments" are charges made for the use of borrowed financial assets and comprise payments made at predetermined dates of percentages (fixed or otherwise) of the nominal value of the asset. In the EAA and EAF interest represents the payments on loans raised for operational purposes (e.g. for purchasing land, buildings, machinery, vehicles and other equipment).

134.2. The entries to be shown as "Interest" in Tables 3 are the sums paid by agricultural units to others. Imputed interest for own capital used in agricultural holdings is not to be included here; it will occur as a component of the residual "net income from agricultural activity" (cf. 135 and 136).

135. "Net income from family agricultural activity" is calculated in Tables 3 as a residual value (net operating surplus less rents and interest) and represents (cf. 132.2) compensation for the managerial skills and work performed by the agricultural holder and unpaid members of his family, plus the notional interest due to the holder for the use of his own capital. ("Holder" here, of course, covers all similar persons operating in charge of producer units, including companies, cooperatives, contractors' enterprises, etc., within the branch "Agriculture and Hunting"). It must, however, be clearly understood that net income from agricultural activity calculated in this way excludes income flows into producer units such as social benefits, and outward flows such as social contributions and other transfers.

136. "Net income from total agricultural activity" is calculated in Tables 3 by deducting rents and interest payments from net operating surplus and adding compensation of employees (which is equivalent to adding compensation of employees to net income from family agricultural activity). It represents compensation for total labour input in agriculture, whether paid or unpaid, plus the notional interest due to the holder for the use of his own capital.

## APPENDIX

### Market-regulating agencies

#### 137.1. Market-regulating agencies

- concerned exclusively with the purchase, sale or storage of goods, are assigned in a breakdown of the economy by
  - ) branches, to trade; this activity is deemed by convention to be the output of non-financial market services (ESA 308a)
  - ) sectors, to non-financial corporate and quasi-corporate enterprises, if these market-regulating agencies are considered as institutional units within the meaning of the ESA, and if not, to the sector to which the larger unit belongs.
- concerned exclusively with the payment of subsidies, are assigned in a break down of the economy by
  - ) branches, to the branches of non-market output of general government, since only the government (apart from institutions of the European Communities) can pay subsidies according to ESA ruling
  - ) sectors, to the sector general government (cf. preceding paragraph).
- concerned with both the purchase, sale and storage of goods and the payment of subsidies, are assigned in a breakdown of the economy by
  - ) branches, to the branch trade (together with those units of homogeneous production which buy, sell or store goods) and to the branches of non-market output of general government (together with the remaining units of homogeneous production which make up such branches)
  - ) sectors, to the sector general government, since only this sector can pay subsidies. Assignment to another sector would mean that the subsidies paid by the market-regulating agency no longer constituted subsidies within the meaning of the ESA.

137.2. An important consequence of the strict application of the payment criterion consists in the fact that, as mentioned above, various subsidies within the meaning of the ESA do not appear in the EAA, since they are recorded under the branches and sectors to which the subsidies are paid, e.g. particularly in the case of market-regulating agencies. If market-regulating agencies are assigned to the sector general government, subsidies paid to the agencies in connection with market-regulating processes (purchase, storage and re-sale) also appear in the sector general government as recipient. Thus, subsidy payments from general government to general government are also possible.



## V. THE VALUATION OF TRANSACTIONS

### A. PRICE CONCEPTS (cf. ESA 627-633)

138. The valuation of transactions in goods and services in the EAA and EAF is carried out:

- for sales, at ex-farm prices (EAA) or roadside pick-up prices (EAF) called producers' prices in the ESA)
- for certain aspects of production, at manufacturing cost prices (called basic prices in the ESA)
- for purchases, at acquisition prices (called purchasers' prices in the ESA).

#### 1. Ex-farm price

139.1. The ex-farm price of a product is the market price from the point of view of the producer; it is the manufacturing cost price plus the producer's profit plus taxes paid by the producer on the product minus subsidies which he receives on the product (ESA para. 630).

139.2. In the EAF, the price corresponding to the ex-farm price is the price payable for collecting timber from a point at the roadside (roadside pick-up price). It therefore also includes primary conversion of the timber, skidding to the roadside, and stacking.

139.3. For the purposes of compiling the EAA and EAF under the "net" recording system (cf. 146), VAT invoiced by producers (cf. 145.3 (a)) is ignored in determining ex-farm prices and roadside pick-up prices (cf. 152.2).

#### 2. Manufacturing cost price

140.1. The manufacturing cost price of a product is the sum of the costs of the goods and services utilized together with the remuneration of the factors of production which are needed to produce it including, in principle, the notional remuneration for the farmer's labour and that of unpaid members of his family, remuneration for the exercise of his managerial skills and interest due for the use of his own capital.

The manufacturing cost price does not, however, include the producers' profit or any commodity tax on the particular product, neither does it reflect the reduction in market price which payment of a commodity subsidy will make possible, but it does include other net taxes linked to production (1) which the unit pays, directly or indirectly, in respect of the factors of production used in the production process of the item concerned, as well as any licences or duties necessary for the operation of the producer unit (ESA para 628, 417.1, 425.2).

140.2. Apart from determining the manufacturing cost price of a commodity from the sum of the costs of materials and the remuneration of factors of production, it can also be more easily derived from the ex-farm price by adding the commodity subsidies, deducting the commodity taxes and deducting the producer's profit.

140.3. It should be noted that subsidies and taxes not specifically tied to individual products but which, more generally, are described as "other taxes (or subsidies) linked to production" (ESA 628), as well as subsidies and taxes related to input goods and services used in the production process, are all implicitly taken account of in the summation of the costs of materials and remuneration of factors of production referred to in 140.1,

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(1) "Other net taxes linked to production" means "other taxes linked to production" (ESA 417.1) less "other production subsidies" (ESA 425.2).

e.g. the cost of fertilizers used will reflect any reduction in price made possible by the payment of a subsidy either to the fertilizer manufacturer or the farmer; the cost of petrol bought will include any tax paid as part of the purchase price; and other subsidies (cf. 131.3) will, in theory at least, have reduced the total cost of production of individual commodities.

### 3. Acquisition price

141.1. Acquisition prices are the inclusive farm-gate prices paid by farmers when purchasing goods and services contributing to agricultural production and investment. For the purposes of the EAA and EAF they include any taxes except deductible VAT (cf. 145.3 (b)) levied before the items are acquired by the purchasing farmer, and reflect reductions in prices made possible by the payment of subsidies to the suppliers (1) of the goods or services. Distribution charges (trade margins, transport costs to the farm-gate etc.) are also included.

141.2. Where means of production are directly imported by producer units, acquisition prices for use in the EAA and EAF will include any import duty, non-deductible VAT (cf. 129 and 145-147), and monetary compensatory amounts (receipts or payments) (cf. 128).

## B. TREATMENT OF THE TAX ON VALUE-ADDED (VAT)

145.1. The description in paragraphs 634-638 of the ESA refers to the standard VAT system under which each enterprise is allowed to deduct from the amount of VAT due on its own production, the amount of tax it has paid on its purchases of intermediate inputs or capital goods. However, in addition to the standard VAT regulations, there are special regulations for agriculture and forestry (VAT flat rate systems) which differ in form from one country to another.

145.2. The flat rate assessment systems used in the EEC countries can be grouped into two main types of compensation for VAT paid on purchases:

- via price. In this case, farmers subject to the flat rate system sell their products at a price increased by the VAT flat rate percentage, but do not pay the invoiced VAT to the financial authorities since the VAT they invoice and retain is calculated to compensate as exactly as possible for the VAT which they have paid on their purchases (German system);
- as a refund. Under this system, farmers sell their products exclusive of VAT. On application to the financial authorities, they later receive a refund calculated as a flat rate percentage (2) applied to their sales in compensation for the VAT which they have paid on their purchases (French system).

145.3. Definition of concepts

The following concepts which are defined in the ESA for the standard VAT system apply also to the flat rate systems:

- (a) VAT invoiced by the producer: this is the VAT which the producer calculates at the rate applying to the product sold and which he charges on his invoice to each domestic purchaser;

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- (1) If subsidies on input items are, however, paid to the farmer, the acquisition price to be used is the full (unreduced) price paid to the supplier of the goods or services; the subsidy in such cases is recorded in the EAA or EAF separately.
- (2) The percentage rate may vary according to the type of product and channel of distribution.

- (b) VAT invoiced to the producer on intermediate consumption: this is the VAT calculated at the rate applying to each product bought and which the producer has paid on his intermediate inputs; this is called deductible (1) VAT on intermediate consumption;
- (c) VAT invoiced to the producer on purchases of fixed capital goods: this is called deductible VAT on purchase of capital goods;
- (d) VAT payable by the producer on his current transactions: this is the difference between the VAT invoiced by the producer and the VAT invoiced to the producer on his intermediate consumption purchases (a-b);
- (e) Total VAT paid by the producer: this is the difference between the VAT invoiced by the producer and the total VAT invoiced to the producer on his intermediate consumption purchases and on his purchases of capital goods (a-b-c).

146.1. The provisions of the ESA lay down two methods of recording VAT:

- the "gross" system (i.e. output and input prices recorded inclusive of VAT)
- the "net" system (i.e. output and input prices recorded exclusive of deductible VAT)

146.2. In tax law, VAT is treated as a "transitory item" for producers, so that the deductible VAT which a producer has to pay on his purchases does not represent a true cost component for his own calculations and can be regarded merely as an advance instalment of the VAT which he has to calculate on his own turnover, thus leaving him only the difference to pay to the tax office. Since in general it is only the final consumer of a product who has to pay the VAT levied on that product, the producer (together with the producers of the intermediate consumption goods required) acts effectively as an agent of the tax office.

Conversely, where it is not possible for the producer to deduct (or reclaim) tax paid on purchases (non-deductible VAT), the VAT in these cases should be regarded as a component of costs.

146.3. Since in agriculture and forestry the majority of purchases of inputs and capital goods carry deductible VAT, the net recording system is preferred for economic accounting in the EAA and EAF.

#### 147.1. Operation of net recording method

For farmers subject to the standard system there is no accounting difficulty; VAT invoiced on products sold, or otherwise disposed of, is ignored in the EAA and EAF and should not appear in any output price used for evaluating final output, while deductible VAT paid on purchases of items of intermediate consumption and fixed capital goods is also excluded from the relevant prices when calculating expenditures for the EAA and EAF.

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- (1) The variations between Member States in the VAT systems which they operate sometimes produce situations in which VAT paid by farmers on their purchases cannot be recovered or compensated for. Such VAT payments are referred to as "non-deductible" VAT which may be defined as VAT paid on purchases which farmers who are not subject to the flat-rate system may not deduct from VAT invoiced on sales and for which there is thus no compensation; and VAT paid on purchases for which farmers subject to the flat-rate system are not fully compensated via the selling price or via reimbursement.

147.2. For farmers subject to either of the two flat-rate systems, however, there are accounting problems. As is obvious, the compensation allowed to individual farmers will only rarely be exactly equal to the VAT which they have paid on their purchases, and the same is true for the "national farm". While, therefore, under the flat-rate systems, the individual items of output, input and gross fixed capital formation are to be recorded exclusive of deductible VAT (as with the standard system), any under- or over-compensation must be entered separately in the EAA and EAF.

147.3. It has not, unfortunately, so far been possible to achieve agreement between Member States on a unique method of recording over- and under-compensation of VAT under the flat-rate systems and countries currently vary in their accounting presentation of the amounts involved. The following acceptable alternatives cover the various methods currently being used:

An over-compensation of VAT paid on purchases can be recorded:

- (i) under the value of production against a new heading "over-compensation of VAT" inserted before the calculation of "final production";
- (ii) under "subsidies";
- (iii) under "taxes linked to production" as a negative item;
- (iv) against a new heading "over-compensation of VAT" inserted after the headings "subsidies" and "taxes linked to production".

As stated in 147.2, the individual elements of final production, intermediate consumption and gross fixed capital formation are calculated exclusive of deductible VAT.

An under-compensation of VAT paid on purchases can be recorded:

- (v) partly under intermediate consumption and partly under gross fixed capital formation, the proportions being fixed by convention. This involves recording individually the intermediate consumption and gross fixed capital formation items exclusive of deductible VAT and inserting new headings for "under-compensation of VAT on intermediate consumption" and "under-compensation of VAT on gross fixed capital formation" as part of intermediate consumption and fixed capital formation respectively;
- (vi) exclusively under intermediate consumption, it being assumed that VAT paid on gross fixed capital formation is always fully compensated. This procedure would seem justified if under-compensation was generally of a low order of magnitude;
- (vii) exclusively under taxes linked to production (or perhaps with a proportion under gross fixed capital formation as above);
- (viii) exclusively against a new heading "under-compensation of VAT" inserted after the headings "subsidies" and "taxes linked to production", with a negative sign, (or perhaps with a proportion under gross fixed capital formation as above).

148. In the interest of harmonization of the EAA and EAF and to maximize the conceptual accuracy of gross value-added at market prices, solutions (iv) and (v) are considered the most appropriate; their adoption by all Member States as soon as possible is, therefore, strongly recommended. The contents of para. 129 should also be carefully noted when calculating gross value-added at factor cost.

## C. VALUATION IN THE EAA AND THE EAF (cf. ESA para. 626-636)

### 1. Valuation of final output

The prices to be used for the various headings in the tables are as follows:

#### 149. Processing by producers (10p) (1)

149.1. Here it is necessary to value those agricultural or forestry products which will undergo further processing to form products which according to the NACE/CLIO belong to a different branch. The further processing is, however, carried out in the same enterprise in which the products were originally produced.

Flows of this type should be valued at ex-farm prices (EAA) or roadside pick-up prices (EAF).

149.2. It should be emphasized that this heading should not include those agricultural products which undergo further processing within farmers' households, such as milk into butter and cheese and fresh meat into sausage and preserved meats. These are entered under "Own consumption" (cf. 150). Nor does it include products for processing outside the "national farm" which are entered under "Sales" (cf. 152).

#### 150. Own consumption (11p)

150.1. Agricultural products which are used for farmers' private consumption should be valued at ex-farm or roadside pick-up prices.

#### 151. Payment in kind (11p)

151.1. Payment in kind, i.e. the provision of own products to employees within the enterprise as remuneration, should also be valued at ex-farm or roadside pick-up prices.

#### 152. Sales (12p)

152.1. Sales are generally valued at the price actually obtained on the market viz. the ex-farm price or the roadside pick-up price. When using this price, it is assumed that the obligation of the seller ends at the farm gate or at the roadside. Subsequent services provided until the product reaches the user are therefore not included, i.e. they are not covered by the ex-farm price or the roadside pick-up price.

152.2. Ex-farm or roadside pick-up prices include all net taxes except VAT invoiced by producers (cf. 139.3) which the producer has had to pay in connection with his output, i.e. all taxes linked to production owed to the government (or to an institution of the European Communities), less the subsidies received from the government. It naturally includes only those taxes which the farmer was required to pay by law; in other words, no notional tax is calculated on non-taxable or tax-free turnover, since this would produce inconsistencies within the ESA.

152.3. The ex-farm price for a given product is not necessarily the same on every occasion when the product is supplied. For example, goods exported directly by the producer may have a different qualitative structure from sales for domestic use and may, therefore, have a different price. The "Sales" column in the EAA is therefore sub-divided into "Domestic sales" (12 p1) and "Sales abroad" (12 p2).

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(1) The codes given in brackets indicate the numbering of the columns in Table 1 of the EAA (cf. Appendix 3). In the EAF, a breakdown of this kind by types of use of output is not yet provided, owing to the difficulties of data collection, and prices are shown only globally.

152.4. Where a producer unit is itself engaged in exporting directly the production resulting from its own activity, any receipts or payments of monetary compensatory amounts relating to the exportations are ignored in the EAA and EAF since they are proper to the branch "Wholesale trade" (Group 610 of the NACE/CLIO).

152.5. In forestry, it is not always customary for the roadside pick-up price to be agreed and invoiced between seller and purchaser. The timber is frequently sold while still standing, in which case felling and skidding the timber to the roadside are the purchaser's responsibility. For recording in the EAF, the price agreed on must be increased by the price of felling and skidding the timber to the roadside. It is irrelevant who actually provides these additional services; they always count as a service of forestry. They are accounted for on the expenditure side by intermediate consumption, consumption of fixed capital and the costs of the factors of production utilised.

### 153. Own-account produced fixed capital goods (13p)

153.1. Own-account produced fixed capital goods constitute (cf. 96)

- in agriculture:

- ) livestock originating from domestic output which are transferred to capital assets, and
- ) enlargement of existing stocks of orchards, vineyards, hop-fields, etc.

- in forestry:

- ) afforestation of new areas, enlarging existing stocks of forest areas, and also conversion.

153.2. Manufacturing cost prices should be used for the valuation of own-account produced fixed capital goods, except for any elements contributing to the capital formation which are purchased from outside the "national farm"; for these acquisition prices should be used.

### 154. Change in stocks (16p)

154.1. Changes in stocks are to be valued at the manufacturing cost prices obtaining at the time of addition to or withdrawal from stocks (replacement price in the case of withdrawals).

154.2. Methods of approximating the theoretical measure described in 154.1. differ according to whether the changes in the volume of stocks (additions and withdrawals) are regular or vary a great deal during the relevant period.

The use of average prices, i.e. mean prices for the reference period, to value the quantitative additions to and withdrawals from stocks held by producers is based on the assumption that stocks build up and decrease continuously over the reference period. This assumption is not valid for agriculture, at least as regards the build-up of stocks of crop products. Crop production is not continuous but subject to the seasonal cycle. This means that additions to stocks of crop products can occur only after the harvest in the second half of the calendar year in question. The same applies to the replenishment of stocks following withdrawals.

Additions to stocks must therefore be valued at the manufacturing cost prices obtaining at the time of the harvest (often the months between the harvest and the end of the calendar year). Similarly, withdrawals from stocks must be valued at the manufacturing cost prices obtaining at the time of the harvest since, even if it can be assumed that the outflow is distributed over the whole calendar year, any replenishment of stocks still cannot take place (and the replacement price cannot be measured) until after the harvest.

Separate valuation of incoming and outgoing stocks is based on the assumption that the data available are adequate for this purpose. Where this is not the case, stock changes must be valued directly. In this case, valuation must be carried out in the same way as for additions and withdrawals, irrespective of the net result of changes in stocks (increase or decrease). It should be added that this direct valuation of stock changes produces the same result in terms of value as the separate valuation of additions and withdrawals, since the price applied is the same in both cases (manufacturing cost price at the time of harvesting in the reference year).

### 154.3 Valuation of changes in wine stocks

If these rules are applied strictly to stock additions and withdrawals for wine, the value corresponding to the improvement in quality of certain wines as a result of the aging and maturing process over a period of years would not be recorded as production in the national accounts and the economic accounts for agriculture since it would be regarded as a capital gain.

The increase in the value of wine while in the cellar is actually made up of two components :

- a pure price component;
- a volume component.

Changes in the value of stocks which result solely from price changes are generally agreed to be capital gains or losses and should appear in the capital accounts.

Changes in the value of stocks which result from a change in volume should rather be covered by the flow accounts since they are a form of production. A change in the quality of a given product must be considered as a change in volume and not price (ESA 914). The aging of wine is such a change in volume, admittedly of a qualitative and not a quantitative nature. The young wine placed in storage in year  $t$  undergoes the process of aging and in the course of time becomes wine aged  $t + 1, \dots, t + n$ , of higher quality and price, which is virtually a new product. These increases in the value of the wine as a result of changes in quality ought to be reflected in the national accounts and the economic accounts for agriculture as part of the value of output, apportioned in time according to the year in which they occurred and as a positive element in stock changes (i.e. as additions to stocks).

If the change in volume as a result of age and maturity is to be quantified in value terms, the annual changes in value of wine stocks must be adjusted to eliminate the effect of the change in wine prices from year to year.

To do this, the following information is required:

- (1) the quantities of wine in stock for each reference year  $t$ , classified by producing regions, quality and age (vintage year);
- (2) prices in year  $t - 1$  for the quantities of wine of the various producing regions, qualities and vintages in stock in each reference year  $t$ .

These data allow the quantities of wine in stock - with a breakdown by producing region, quality and age - to be valued first at the prices in the preceding year for wine of the same producing region, quality and age and then at the prices in the preceding year for wine of the same producing region and quality which is one year younger.

The difference between these two values would thus be the increase in volume of the wine stock between any two successive years.

The method thus consists in determining the increase in the value of wine in a given reference year after deflation, i.e. adjustment for the movement in wine prices.

The amount of data required to apply this theoretical method would be considerable and would probably not be available in the Member States. It also seems doubtful whether the effort required for such calculations is justified.

The two simpler methods outlined below allow an approximative measure of these age-related increases in the value of wine to be included in the economic accounts for agriculture.

One possibility is to value withdrawals at the same historical manufacturing cost price, i.e. in the half-year of harvesting and addition to stocks. This also assumes knowledge of the distribution of stocks, (and withdrawals from stocks) per vintage year. Since sales are naturally valued at the average ex-farm price for the year, any increase in value between the vintage year and the year of sale is allocated to final output for the year of sale (and is thus not distributed over time). It should be noted that with this method any change in the value of the wine, including the effects of inflation, is regarded as a contribution to the output value of the year of sale.

A further possibility is to value additions to stocks of wine to be aged on the producer's premises at the ex-farm selling prices obtaining for matured wines during all or part of the second half-year. The expected increase in value resulting from aging is thus partly included in the final output of the vintage year. This increase in value is only partly accounted for since the wines in question are not valued at their true selling price but at the price of older wines of the same origin. The difference between their true selling price and that used to value additions to stocks is not included in the output value since it is regarded as a capital gain (NB: this difference includes the effects of inflation). Thus this method involves anticipating the increase in the wine's value resulting from aging. On the other hand, since no distinction is made between the vintage years of wines in stocks or sold, it assumes that the quality wine market is homogeneous as regards the age of wine.

Of course, neither of these pragmatic methods makes it possible to distribute over time the increase in value produced by aging: one records it after the event and the other before event. This disadvantage may be regarded as slight in both cases if it is assumed that there is a certain stability over time in the production of "aged" wine. The first method requires more data than the second but allows more accurate analysis and evaluation of the make-up of stocks and sales for each vintage year. Only the second method, however, makes it possible to distinguish (albeit approximatively) the pure price component and the volume component in the increase in the value of wine during its cellar life.

These two pragmatic methods seem acceptable given the present situation regarding the availability of data. Each Member State will choose in the light of the particular structure of its wine industry and its statistical system.

154.4. In the valuation of changes in stocks of livestock, it is immaterial whether animals have been domestically produced from birth or whether they were imported from abroad as young animals and then reared further and fattened domestically. After the imported animals have been received by the domestic holding which continues to rear them, the animals have, as it were, become naturalized, and in the subsequent course of the production process they count as domestic output.

154.5. For evaluating changes in livestock inventories at the end of any reference period, it is necessary to distinguish between "current account" and "formation of capital account" livestock (cf. 96.1 and 98). For the former category, the manufacturing cost price is to be regarded as the sum of the costs of production over the years of life of the average animal in the individual livestock classes up to and including the reference year; for "formation of capital account" animals, manufacturing cost prices should be defined in the same way but only up to the moment of entry into the breeding herd.

154.6. Where an animal was originally imported before commencing its life on the national farm, the acquisition price at the time of importation can be regarded as representing the sum of the production costs up to that point of time (cf. also 103 and 104).

154.7. Changes in stocks of products from domestic forestry, viz. timber, are also valued at manufacturing cost prices. For felled timber which has not yet been skidded to the roadside, the manufacturing cost price is fixed so as not to include the costs of skidding (cf. 152.5).

## **2. Valuation of intermediate consumption**

155. Intermediate consumption is valued at the acquisition prices paid by farmers at the farm-gate (cf. 141).

## **3. Valuation of gross fixed capital formation**

156. Where it consists of bought-in goods, gross fixed capital formation is valued in the EAA and the EAF at acquisition prices.

## **4. Valuation at constant prices**

157. Provision is made in the tables of the EAA and EAF for a valuation of final output, intermediate consumption, value-added (at market prices) and gross fixed capital formation at constant prices. The purpose of valuation at constant prices is to value the corresponding magnitudes of the reference period as if the prices of the base year had not altered in the meantime. Price influences which have taken effect between the base year and the reference period are thus eliminated. The values obtained as a result of this price adjustment are known as volumes. The result of calculations at constant prices helps to assess the changes in the aggregates in real terms.

158. The principle of the calculation of final output at constant prices is simple: the product quantities of the reference year for processing by producers, own consumption, payment in kind, domestic sales and sales abroad, own-account produced fixed capital goods and changes in stocks are multiplied by the corresponding prices for the base year, and the values thus obtained are then added together.

This calculation should be carried out for each individual product (preferably disaggregated by variety and quality to avoid errors caused by compositional changes over time). For certain headings, however, no data on quantities are available and estimates must be made by deflating current-priced values with suitable price indices.

159. In theory, the constant-priced evaluation of the agricultural and forestry accounts should be effected for all items in order to arrive at constant-priced "net income from agricultural (and forestry) activity". But the practical difficulties involved, particularly for those elements of the accounts where no quantity data exists, are at present such as to preclude some Member States from achieving this.

Moreover, Chapter IX of the ESA which deals with the measurement of changes in price and volume in national accounts, specifically recommends (in paras. 906 and 907) that, on account of the difficulties, calculations at constant prices should be restricted to the components of net value-added at market prices, including the consumption of fixed capital (for which see para. 940 of the ESA), and gross fixed capital formation.

160.1. The valuation at constant prices of any residual over-compensation or under-compensation of VAT entering into the EAA or EAF presents special difficulties. As described in paras. 145-147, under both the standard and flat-rate systems, the valuation, whether at current or constant prices, of each item of output, intermediate consumption or gross fixed capital formation liable to VAT gives rise to a "VAT value" for each item; these remain in the EAA and EAF under the "gross recording" system, but are excluded under the "net" system, except for those amounts of over- or under-compensation of VAT (including non-deductible VAT) paid on purchases, which are aggregated and recorded in the accounts by one of the methods described in para. 147.3.

160.2. In theory, applying base-year rates of VAT to current year quantities valued at base-year prices net of VAT, item by item, may give an aggregate over-or under-compensation of VAT at constant prices which will fall to be recorded by individual Member States according to the method of para. 147.3 which they have chosen to employ. As the constant-priced calculations in the EAA and EAF are restricted to net value-added at market prices and gross fixed capital formation (cf. 159), the constant-priced VAT aggregated calculation of over- or under-compensation may, or may not enter into one or both of these constant-priced accounts depending on the choice made.

160.3. It should be noted that an over-compensation arising at current rates of VAT for any given year may become an under-compensation at base-year VAT rates, and vice versa.

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## APPENDIX I

### LIST OF PRODUCTS DEFINING THE BRANCH 'PRODUCTS OF AGRICULTURE AND HUNTING'(1) (class 01 of the NACE/CLIO)

#### Product groups (3 digit level)

- 011 Crops and crop products of agriculture whether cultivated or not
- 012 Grape must and wine
- 013 Olive oil, unrefined
- 014 Animals and animal products of agriculture and hunting
- 015 Contract work at the agricultural producer stage

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(1) This list is not completely consistent with the NACE Rev. 1 nomenclature of activities

**Individual headings in the product list  
and corresponding NACE/CLIO groups, sub-groups, etc.**

011		CROPS AND CROP PRODUCTS OF AGRICULTURE WHETHER CULTIVATED OR NOT
011.	1	<u>Cereals (excluding rice).(1)</u>
011.	11	Wheat and spelt
	111	Soft wheat and spelt
	111.1	Winter wheat and spelt
	111.11	Winter wheat
	111.12	Spelt
	111.2	Spring wheat
	112	Durum wheat
	112.1	Winter wheat
	112.2	Spring wheat
011.	12	Rye and meslin
	121	Rye
	121.1	Winter rye
	121.2	Spring rye
	122	Meslin
011.	13	Barley
	130.1	Spring barley
	130.2	Winter barley
011.	14	Oats and summer cereal mixtures
	141	Oats
	142	Summer cereals mixtures
011.	15	Maize
011.	19	Other cereals (excluding rice)

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(1) Cereal seed (excluding rice seed) is included in the appropriate headings and sub-headings of sub-group 011.1.

191	Buckwheat
192	Millet
193	Grain sorghum
194	Canary seed
195	Triticale
199	Cereals, not elsewhere specified (excluding rice)
011. 2	<u>Rice (in the husk or paddy) (1)</u>
011. 3	<u>Pulses</u>
011. 31	Dried peas and fodder peas
311	Dried peas (other than for fodder)
311.1	Dried peas (excluding chick peas)
311.2	Chick peas
312	Fodder peas
011. 32	Haricot beans, kidney and horse beans
321	Haricot beans
322	Kidney and horse beans
011. 39	Other pulses
391	Lentils
392	Vetches
393	Lupins
399	Pulses, not elsewhere specified as well as pulse mixtures and cereal and pulse mixtures
011. 4	<u>Root crops</u>
011. 41	Potatoes
411	Potatoes (excluding seed potatoes)
411.1	New potatoes
411.2	Main crop potatoes
412	Seed potatoes

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(1) Rice seed is included in sub-group 011.2

011.	42	Sugar beet
011.	49	Mangolds; swedes; fodder carrots and fodder turnips; other root crops
	491	Mangolds
	492	Swedes, fodder carrots, fodder turnips
	492.1	Swedes
	492.2	Fodder carrots, fodder turnips
	499	Other root crops
	499.1	Jerusalem artichokes
	499.2	Sweet potatoes
	499.9	Root crops, not elsewhere specified
011.	5	<u>Industrial crops</u>
011.	51	Oil seeds and oleaginous fruit (excluding olives)
	511	Rape and turnip rape seed
	511.1	Winter rape seed
	511.2	Summer rape seed
	511.3	Turnip rape seed
	512	Sunflower seed
	513	Soya beans
	514	Castor seed
	515	Linseed
	516	Sesame, hemp, mustard and poppy seed
	516.1	Sesame seed
	516.2	Hemp seed
	516.3	Mustard seed
	516.4	Oil poppy and poppy seed
	517	Groundnuts
	518	Oleaginous products, not elsewhere specified
011.	52	Fibre plants

	521	Flax
	522	Hemp
	523	Cotton
011.	53	Unmanufactured tobacco (including dried tobacco)
011.	54	Hop cones
011.	59	Other industrial crops
	591	Chicory roots
	592	Medicinal plants, aromatics, spices and plants for perfume extraction
	592.1	Saffron
	592.2	Caraway
	592.9	Medicinal plants, aromatics, spices and plants for perfume extraction, not elsewhere specified
	593	Sugar cane
011.	6	<u>Fresh vegetables</u>
011.	61	Brassicas
	611	Cauliflowers
	619	Other brassicas
	619.1	Brussels sprouts
	619.2	White cabbages
	619.3	Red cabbages
	619.4	Savoy cabbages
	619.5	Green cabbages
	619.7	Broccoli (Brassica oleraca)
	619.9	Cabbages, not elsewhere specified
011.	62	Leaf and stalk vegetables other than brassicas
	621	Celery and celeriac
	622	Leeks
	623	Cabbage lettuces
	624	Endives
	625	Spinach

- 626 Asparagus
- 627 Witloof chicory
- 628 Artichokes
- 629 Other leaf and stalk vegetables
  - 629.1 Corn salad
  - 629.2 Cardoens and edible thistle
  - 629.3 Fennel
  - 629.4 Rhubarb
  - 629.5 Cress
  - 629.6 Parsley
  - 629.9 Leaf and stalk vegetables not elsewhere specified
- 011. 63 Vegetables grown for fruit
  - 631 Tomatoes
    - 631.1 Tomatoes intended for direct consumption
    - 631.2 Tomatoes intended for processing
  - 632 Cucumbers and gherkins
  - 633 Melons
  - 634 Egg plants (aubergines), marrows, courgettes and pumpkins
  - 635 Sweet capsicum
  - 639 Other vegetables grown for fruit
- 011. 64 Root and tuber crops
  - 641 Kohlrabi
  - 642 Turnips
  - 643 Carrots
  - 644 Garlic
  - 645 Onions and shallots
  - 646 Salad beetroot (red beet)
  - 647 Salsify and scorzonera
  - 649 Other root and tuber crops (chives, radishes, French turnips, horse radishes)

011.	65	Pod vegetables
	651	Green peas
	652	Beans
	659	Other pod vegetables
011.	66	Cultivated mushrooms
011.	7	<u>Fresh fruit, including citrus fruit and tropical fruit (excluding grapes and olives)</u>
011.	71	Dessert apples and pears
	711	Dessert apples
	712	Dessert pears
011.	72	Cider apples and perry pears
	721	Cider apples
	722	Perry pears
011.	73	Stone fruit
	731	Peaches (including nectarines)
	732	Apricots
	733	Cherries
	734	Plums (including greengages, mirabelles and quetsches)
	739	Other stone fruit
011.	74	Nuts
	741	Walnuts
	742	Hazelnuts
	743	Almonds
	744	Chestnuts
	745	Other nuts
	745.1	Pistacchios
	745.9	Nuts, not elsewhere specified
011.	75	Other tree fruits
	751	Figs

	752	Quinces
	759	Other tree fruits, not elsewhere specified (excluding tropical fruit)
011.	76	Strawberries
011.	77	Berries
	771	Currants
	771.1	Black currants
	771.2	Other currants
	772	Raspberries
	773	Gooseberries
	774	Kiwis
	775	Other berries (e.g. cultivated blackberries)
011.	78	Citrus fruit
	781	Oranges
	781.1	Sweet oranges
	781.2	Other oranges
	782	Mandarines
	783	Clementines
	784	Lemons
	785	Grapefruit
	786	Other citrus fruit
	786.1	Citrons
	786.2	Limes
	786.3	Bergamots
	786.9	Citrus fruit, not elsewhere specified
011.	79	Tropical fruit (excluding nuts)
	791	Pineapples
	792	Bananas
	793	Avocados
	799	Other tropical fruit

011.	8	<u>Grapes and olives</u>
011.	81	Grapes
	811	Dessert grapes
	812	Raisins
	813	Other grapes (for wine making, and fruit juice production)
011.	82	Olives
	821	Table olives
	822	Other olives (for olive oil production)
011.	9	<u>Other crops and crop products</u>
011.	91	Fodder plants (1)
011.	92	Nursery plants
	921	Fruit trees and bushes
	922	Vine slips
	923	Ornamental trees and shrubs
011.	93	Vegetable materials used primarily for plaiting
	931	Osier, rushes, rattans
	932	Reeds, bamboos
	939	Other vegetable materials used primarily for plaiting
011.	94	Flowers, ornamental plants and Christmas trees (2)
	941	Flower bulbs, corns and tubers
	942	Ornamental plants
	943	Cut flowers, branches and foliage
	944	Christmas trees (2)
	945	Perennial plants
011.	95	Seeds
	951	Agricultural seeds (3)
	952	Flower seeds

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(1) e.g. hay, clover, kale, cabbage etc. but excl. fodder roots.

(2) Grown specifically as Christmas trees; excludes "loppings for Christmas trees"

(3) Excluding cereal seeds, rice seeds and seed potatoes (011.1,011.2,011.412)

011.	96	Products gathered in the wild (1)
011.	97	By-products from plant cultivation of (2):
	971	Cereals (excluding rice)
	972	Rice
	973	Pulses
	974	Root crops
	975	Industrial crops
	976	Fresh vegetables
	977	Fruit and citrus fruit
	978	Grapes and olives
	979	Other plants
011.	99	Vegetable products, not elsewhere specified
012		GRAPE MUST AND WINE
012.	0	<u>Grape must and wine</u>
012.	01	Grape must
012.	02	Wine
	021	Quality wine (including Port and Madeira)
	022	Table wine and other wine (e.g. for distilling or processing)
012.	09	By products of wine production (3)
013		OLIVE OIL, UNREFINED
013.	0	<u>Olive oil</u>
013.	01	Pure olive oil
013.	02	Olive oil, unrefined (4)
013.	09	By products of olive oil extraction (5)

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(1) e.g. wild mushrooms, cranberries, bilberries, blackberries, raspberries, etc.

(2) e.g. straw, beet and cabbage leaves, pea and bean husks

(3) e.g. wine lees, argol, etc.

(4) The distinction between headings 013.01 and 013.02 is based on the method of processing rather than on different production stages

(5) e.g. olive oil cakes & other residual products of olive oil extraction

014		ANIMALS AND ANIMAL PRODUCTS OF AGRICULTURE AND HUNTING
014.	1	<u>Cattle</u>
014.	10	Domestic cattle
	101	Calves
	102	Other cattle, less than 1 year old
	103	Heifers
	104	Cows
	105	Male breeding animals
	105.1	1-2 years old
	105.2	More than 2 years old
	106	Cattle for slaughtering and fattening
	106.1	1-2 years old
	106.2	More than 2 years old
014.	11	Other cattle (buffalo and cattle for bullfighting)
014.	2	<u>Pigs</u>
014.	20	Domestic pigs
	201	Piglets
	202	Young pigs
	203	Pigs for fattening
	204	Breeding sows
	205	Breeding boars
014.	3	<u>Equines</u>
014.	31	Horses
014.	32	Donkeys
014.	33	Mules and hinnies
014.	4	<u>Sheep and goats</u>
014.	41	Domestic sheep
014.	42	Domestic goats

014. 5	<u>Poultry, rabbits, pigeons and other animals</u>
014. 51	Hens, cocks, chicks, chickens
014. 52	Ducks
014. 53	Geese
014. 54	Turkeys
014. 55	Guinea-fowl
014. 56	Domestic rabbits
014. 57	Domestic pigeons
014. 59	Other animals
591	Bees
592	Silkworms
593	Animals reared for fur
594	Snails (excluding sea-snails)
599	Animals, not elsewhere specified
014. 6	<u>Game and game meat</u>
014. 61	Game (1)
014. 62	Killed game
014. 7	<u>Milk, untreated</u>
014. 71	Cows' milk
014. 72	Ewes' milk
014. 73	Goats' milk
014. 74	Buffalo milk
014. 8	<u>Eggs</u>
014. 81	Hen eggs
811	Hatching eggs
812	Other
014. 82	Other eggs
821	Hatching eggs

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(1) Live game includes only specially reared game and other game kept in captivity.

822	Other
014. 9	<u>Other animal products</u>
014. 91	Raw wool (including animal hair) (1)
014. 92	Honey
014. 93	Silkworm cocoons
014. 94	By products of animal rearing (2)
014. 95	Animal products, not elsewhere specified
015	CONTRACT WORK AT THE AGRICULTURAL PRODUCER STAGE (3)

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(1) If it is a principal product.

(2) e.g. Wax, manure, liquid manure.

(3) Work which is normally performed by the agricultural holdings themselves, e.g. ploughing, mowing, threshing, tobacco drying, sheep-shearing, care of animals; and establishment of new plantations whether by contractors or farmers themselves.



## APPENDIX II

### MINIMUM LIST FOR THE EAA

COSA codes		NACE/CLIO groups, sub-groups etc.
100	Crop products	011
		012
		013
105	Cereals (excluding rice)	011.1
110	Wheat and spelt	011.11
111	Wheat	011.111.11 .111.2 .112
112	Soft wheat	011.111.11 .111.2
113	Durum wheat	011.112
114	Rye and meslin	011.12
115	Rye	011.121
116	Barley	011.13
117	Oats and summer cereal mixtures	011.14
118	Oats	011.141
120	Grain maize	011.15
121	Other cereals (excluding rice)	011.19
125	Rice (in the husk or paddy)	011.2
130	Dried pulses	011.3
135	Root crops	011.4
136	Potatoes	011.41
137	Sugar-beet	011.42
138	Other root crops (including fodder roots)	011.49
140	Industrial crops	011.5
141	Oil seeds and oleaginous fruit (excluding olives)	011.51

142	Rape and turnip rape seed	011.511
145	Sunflower seed	011.512
148	Soya beans	011.513
149	Other oleaginous products	011.514 .515 .516 .517 .518
150	Fibre plants	011.52
155	Unmanufactured tobacco	011.53
156	Hop cones	011.54
157	Other industrial crops	011.59
160	Fresh vegetables	011.6
162	Cauliflowers	011.611
175	Tomatoes	011.631
185	Other fresh vegetables	011.619 .62 .632 .633 .634 .635 .639 .64 .65 .66
203	Fresh fruit (excluding citrus fruit, grapes and olives, tropical fruit)	011.71 .72 .73 .74 .75 .76 .77
211	Dessert apples	011.711
213	Dessert pears	011.712
218	Peaches (including nectarines)	011.731

225	Other fresh fruit	011.72 .732 .733 .734 .739 .74 .75 .76 .77
230	Citrus fruit	011.78
233	Sweet oranges	011.781.1
235	Mandarines	011.782
237	Lemons	011.784
239	Other citrus fruit	011.781.2 .783 .785 .786
260	Tropical fruit (excluding nuts)	011.79
300	Grapes	011.81
301	Dessert grapes	011.811
305	Other grapes	011.812 .813
310	Grape must and wine	012.01 .02
311	Table wine and other wine (e.g. for distilling or processing)	012.022
312	Quality wine (including Port and Madeira)	012.021
320	Olives	011.82
321	Table olives	011.821
325	Other olives	011.822
330	Olive oil	013.01 .02
380	Other crops and crop products	011.9 012.09 013.09
381	Fodder plants	011.91
382	Nursery plants	011.92
383	Vegetable materials used primarily for plaiting	011.93

384	Flowers and ornamental plants (incl. Christmas trees)	011.94
385	Seeds	011.95
386	Alternate	011.96
		.97
		.99
		012.09
		013.09
400	Animals and animal products	014
401	Animals	014.1
		.2
		.3
		.4
		.5
		.6
407	Cattle (including calves)	014.1
440	Pigs	014.2
460	Equines	014.3
470	Sheep and goats	014.4
477	Poultry	014.51
		.52
		.3
		.54
		.55
501	Other animals	014.56
		.57
		.59
		.61
510	Animal products	014.7
		.8
		.9
515	Milk (untreated)	014.7
525	Eggs	014.8
561	Raw wool	014.91
562	Other animal products	014.62
		.92
		.93
		.94
		.95
	of which	
564	Silkworm cocoons	014.93
001	Contract work at the agricultural producer stage (new plantations)	015

## APPENDIX III

### AGRICULTURAL INTERMEDIATE CONSUMPTION

#### 1. Seeds and plants for:

- 1.1. Cereals (excluding rice)
- 1.2. Rice
- 1.3. Pulses
- 1.4. Root crops
- 1.5. Industrial plants
- 1.6. Vegetables
- 1.7. Tree nursery products (excluding forestry seeds, seedlings and cuttings) including seeds and plants for Christmas trees (1)
- 1.8. Other crop products (e.g. flower bulbs, flower corms and tubers, flower seeds, grass and clover seeds)

#### 2. Livestock and animal products

- 2.1. Cattle, excluding fixed capital livestock
- 2.2. Pigs, excluding fixed capital livestock
- 2.3. Equidae, excluding fixed capital livestock
- 2.4. Sheep and goats, excluding fixed capital livestock
- 2.5. Poultry and day-old chicks
- 2.6. Rabbits, pigeons and other animals, excluding fixed capital livestock
- 2.7. Live game, excluding fixed capital livestock
- 2.8. Eggs for hatching

#### 3. Energy; lubricants

- 3.1. Heating fuels
- 3.2. Motor fuels
- 3.3. Electricity
- 3.4. Lubricants

#### 4. Fertilizers and soil improvers

- 4.1. Straight fertilizers
  - 4.11. Nitrogenous fertilizers
  - 4.12. Phosphatic fertilizers
  - 4.13. Potash fertilizers
  - 4.14. Others

---

(1) "Christmas trees" here do not include "loppings" from mature trees in forests (for which see Appendix VII).

- 4.2. Compound fertilizers
  - 4.21. NPK fertilizers
  - 4.22. NP fertilizers
  - 4.23. PK fertilizers
  - 4.24. NK fertilizers
  - 4.25. Others
- 4.3. Organic fertilizers
- 4.4. Soil improvers (e.g. lime, peat, sand, sludge, synthetic foams)
- 4.5. Others
- 5. Plant protection products, herbicides, insecticides and pesticides
  - 5.1. Fungicides
  - 5.2. Insecticides
  - 5.3. Herbicides
  - 5.4. Others
- 6. Pharmaceutical products  
(medicines where not purchased together with veterinary services)
- 7. Feedingstuffs
  - 7.1. Straight feedingstuffs
    - 7.11. Cereals, rice, pulses
    - 7.12. Potatoes and other root crops
    - 7.13. Milk and dairy products
    - 7.14. Bran and other milling products
    - 7.15. Oilcake
    - 7.16. Other straight feedingstuffs
  - 7.2. Additives used in feedingstuffs
    - 7.21. For cattle
    - 7.22. For calves
    - 7.23. For pigs
    - 7.24. For poultry
    - 7.25. For other livestock (including feed for horses, goats and sheep)
  - 7.3. Compound feedingstuffs - complementary feedingstuffs
    - 7.31. For cattle
    - 7.32. For calves
    - 7.33. For pigs
    - 7.34. For poultry
    - 7.35. For other livestock (including feed for horses, goats and sheep)

- 7.4. Compound feedingstuffs - complete feedingstuffs
  - 7.41. For cattle
  - 7.42. For calves
  - 7.43. For pigs
  - 7.44. For poultry
  - 7.45. For other livestock (including feed for horses, goats and sheep)
  
- 8. Material and small tools, maintenance and repairs
  - 8.1. Material and small tools
    - 8.11. Light implements (e.g. knapsack sprayers, water pumps, small electric motors, small internal combustion engines, electrified fences)
    - 8.12. Small tools (e.g. shovels, spades, hoes)
    - 8.13. Other material (e.g. batteries, lamps, switches, wire, nails, wire netting, sacks, leather straps, planks, barrels, cases, packing material, refills for fire extinguishers, binding materials, plastic sheeting, work clothes, boots, anti-frost smoke, anti-hail covers, detonators for the protection of crops).
  
  - 8.2. Maintenance and repair of vehicles, machinery and other items of equipment
    - 8.21. Spare parts (e.g. sparking-plugs, batteries, reaper components, saw blades, ploughshares, tyres)
    - 8.22. Labour charges (e.g. for blacksmiths, mechanics, electricians)
    - 8.23. Total costs borne by farmers in respect of overall payments to non agricultural units (e.g. material, labour charges, management earnings and profits)
  
  - 8.3. Maintenance and repair of agricultural buildings and other buildings
    - 8.31. Material used (e.g. cement, sand, bricks, tiles, glass)
    - 8.32. Labour charges (e.g. for painters, builders' labourers, carpenters, joiners, plumbers, electricians)
    - 8.33. Total costs borne by farmers in respect of overall payments to non-agricultural units (e.g. material, labour charges, management earnings and profits)
  
- 9. Services
  - 9.1. Veterinary services
    - 9.11. Fees
    - 9.12. Total services (i.e. overall payments for pharmaceutical products and fees)
  
  - 9.2. Rental costs
    - 9.21. Business use of non-residential buildings
    - 9.22. Machinery and other items of equipment without operating staff

### 9.3. Others

- 9.310 Services provided by transport, commercial and storage enterprises costs of intra-agricultural exchange of seeds, feed and capital account and non-capital account livestock
- 9.311 Postage and telephone charges incurred in the performance of work
- 9.312 Insurance premiums (service component only) relating to current and capital good to cover losses incurred in the course of business
- 9.313 Cover charges
- 9.314 Expenditure on artificial insemination and castration
- 9.315 Bank fees
- 9.316 Levies and subscriptions to economic and professional organizations (e.g. farmers' associations, chambers of commerce, etc.)
- 9.317 Expenditure on milk inspection, shows, entries in pedigree registers
- 9.318 Fees for seed certification
- 9.319 Fees for medical examinations of workers necessitated by their employment
- 9.320 Costs of engaging labour (advertising, recruitment)
- 9.321 Fees for agricultural consultants, surveyors, accountants, tax consultants, lawyers, etc.
- 9.322 Costs of soil analyses
- 9.323 Purchase of services of scientific research, market research and advertising
- 9.324 Travel expenses and payments to independent transport firms engaged by the employer for the transport of employees
- 9.325 Other services, not elsewhere specified

### 10. Other items of intermediate consumption

- 10.1. Water rates (1) (business use) related directly or indirectly to the quantity of water consumed
- 10.2. Expenditure on agricultural newspapers and magazines
- 10.3. Substances added in transforming wine must to wine (fining agents, sulphur, sugar, other additives)
- 10.4. Intermediate consumption, not elsewhere specified

### 11. VAT under-compensation (2)

- 
- (1) Water rates paid purely as a tax and unrelated to the quantity of water consumed are recorded under "Taxes linked to production other than VAT".
  - (2) Unless included in item 10.4.

## APPENDIX IV

### AGRICULTURAL GROSS FIXED CAPITAL FORMATION

1. New plantations
  - 1.1. Orchards
  - 1.2. Vineyards and olive plantations
  - 1.3. Hop fields
  - 1.4. Asparagus beds
  - 1.5. Berry plantations
  - 1.6. Christmas tree plantations
  - 1.7. Costs of tending new plantations during the first three years
2. Livestock
  - 2.1. Breeding animals (including dairy animals, but excluding breeding fowls)
  - 2.2. Draught animals
3. Machinery and other equipment
  - 3.1. Rotovators and other two-wheeled plant
  - 3.2. Machinery and plant for soil preparation, sowing, planting, cultivation, fertilization and protection of plants
  - 3.3. Machinery and plant for harvesting
  - 3.4. Machinery and installations on the farm premises
    - 3.41. For crop production (e.g. for reception, sorting, ventilation, storage of products)
    - 3.42. For animal production (e.g. plant for milking, milk refrigeration, dung removal)
    - 3.43. For processing of crops into grape must, wine and olive oil
    - 3.44. Others (e.g. for irrigation)
4. Transport equipment
  - 4.1. Agricultural tractors (1)
  - 4.2. Other vehicles (motor cars, estate cars, lorries)
  - 4.3. Trailers
5. Farm buildings
  - 5.1. New buildings
  - 5.2. Renovations (large-scale repairs) and improvements

---

(1) As defined in Council Directive 80/720/EEC of 24 June 1980 viz "any motor vehicle fitted with wheels or endless tracks and having at least two axles, the main function of which lies in its tractive power and which is specifically designed to tow, push, carry or power certain tools, machinery or trailers intended for agricultural ... use."

6. Other construction, with the exception of soil improvements
  - 6.1. Consolidation of fragmented holdings (costs borne by farmers)
  - 6.2. Road construction
  - 6.3. Dyke construction
  - 6.4. Other construction engineering work, not elsewhere specified
7. Soil improvements
  - 7.1. Clearing
  - 7.2. Drainage
  - 7.3. Irrigation
  - 7.4. Other soil improvements
8. Net purchases of existing reproducible fixed capital goods
9. Others
  - 9.1. Costs incurred in the transfer of ownership of land
  - 9.2. Gross fixed capital formation, not elsewhere specified
10. VAT under-compensation

## APPENDIX V

### LIST OF PRODUCTS DEFINING THE BRANCH' RAW WOOD' (class 02 of the NACE/CLIO)

#### Individual headings in the product list and corresponding NACE/CLIO groups,sub-groups etc.

020.1	<u>Coniferous timber for industrial uses</u>
020. 11	Coniferous long timber
111	Logs (1)
111.1	fir, spruce, douglas
111.2	pine, larch
112	Mining timber
112.1	fir, spruce, douglas
112.2	pine, larch
113	Other long timber
113.1	fir, spruce, douglas
113.2	pine, larch
020. 12	Coniferous stackwood
121	fir, spruce, douglas
122	pine, larch
020. 2	<u>Coniferous firewood</u>
020. 21	fir, spruce, douglas
020. 22	pine, larch
020. 3	<u>Non-coniferous timber for industrial uses</u>
020. 31	Long timber (non-coniferous)
311	Logs (1)
311.1	oak
311.2	beech
311.3	poplar
311.4	other

---

(1) Sawlogs, veneer logs and logs for sleepers.

312	Mining timber
312.1	oak
312.2	other
313	Other long timber
313.1	oak
313.2	beech
313.3	poplar
313.4	other
020. 32	Stackwood (non-coniferous)
32.1	oak
32.2	beech
32.3	poplar
32.4	other
020. 4	<u>Firewood (non-coniferous)</u>
020. 41	oak
020. 42	beech
020. 43	poplar
020. 44	other
020.5	<u>Other products (e.g. forestry seeds, seedlings and cuttings; "loppings" for Christmas trees; bark, cork, resin)</u>
020.6	<u>Contract work at the forestry producer stage (1)</u>

---

(1) Work which is normally performed by forestry holdings themselves, e.g. felling of timber and establishment of new afforestations and conversions of coppice into forest whether by contractors or others.

## APPENDIX VI

### MINIMUM LIST FOR THE EAF

<b>COSA codes</b>		<b>NACE/CLIO groups, sub-groups etc.</b>
620	Coniferous timber for industrial uses	020.1
621	Coniferous long timber	020.11
626	Coniferous stackwood	020.12
630	Non-coniferous timber for industrial uses	020.3
631	Long timber (non-coniferous)	020.31
636	Stackwood (non-coniferous)	020.32
640	Firewood (coniferous and non-coniferous)	020.2 020.4
645	Other products	020.5
001	Contract work at the forestry producer stage	020.6



## APPENDIX VII

### FORESTRY INTERMEDIATE CONSUMPTION

1. Forestry seeds, seedlings and cuttings (excluding seeds and plants for Christmas trees (1))
2. Energy; lubricants
  - 2.1. Heating fuels
  - 2.2. Motor fuels
  - 2.3. Electricity
  - 2.4. Lubricants
3. Fertilizers and soil improvers
  - 3.1. Straight fertilizers
    - 3.11. Nitrogenous fertilizers
    - 3.12. Phosphatic fertilizers
    - 3.13. Potash fertilizers
    - 3.14. Others
  - 3.2. Compound fertilizers
    - 3.21. NPK fertilizers
    - 3.22. NP fertilizers
    - 3.23. PK fertilizers
    - 3.24. NK fertilizers
    - 3.25. Others
  - 3.3. Organic fertilizers
  - 3.4. Soil improvers (e.g. lime, peat, sand, sludge, synthetic foams)
  - 3.5. Others
4. Plant protection products, herbicides, insecticides and pesticides
  - 4.1. Fungicides
  - 4.2. Insecticides
  - 4.3. Herbicides
  - 4.4. Others

---

(1) Includes seeds and plants for forest trees "loppings" from which may be used for ornamental purposes e.g. at Christmas. (See also Appendix III).

5. Material and small tools, maintenance and repairs
  - 5.1. Material and small tools
    - 5.11. Light implements (e.g. rope hoists, knapsack sprayers, water pumps, small electric motors, small internal combustion engines, electrified fences)
    - 5.12. Small tools (e.g. hand saws, axes, shovels, spades, hoes)
    - 5.13. Other material (e.g. ropes, wire, wire netting, buckets, batteries, lamps, switches, nails, packing material, refills for fire extinguishers, plastic sheeting, work clothes, boots)
  - 5.2. Maintenance and repairs of vehicles, machinery and other items of equipment
    - 5.21. Spare parts (e.g. sparking-plugs, batteries, saw blades, tyres)
    - 5.22. Labour charges (e.g. for blacksmiths, mechanics, electricians)
    - 5.23. Total costs borne by forestry in respect of overall payments to non- forestry units (e.g. material, labour charges, management earnings and profits)
  - 5.3. Maintenance and repair of forestry buildings and other buildings
    - 5.31. Material used (e.g. cement, sand, bricks, tiles, glass)
    - 5.32. Labour charges (e.g. for painters, builders' labourers, carpenters, joiners, plumbers, electricians)
    - 5.33. Total costs borne by forestry in respect of overall payments to non- forestry units (e.g. materials, labour charges, management earnings and profits)
6. Other items of intermediate consumption
  - 6.1. Services
    - 6.11. Rental costs
      - 6.111. Business use of non-residential buildings
      - 6.112. Machinery and other items of equipment without operating staff
    - 6.12. Others
      - 6.1210 Services provided by transport, commercial and storage enterprises; costs of intra-forestry exchange of seeds, seedlings and cuttings
      - 6.1211 Postal and telephone charges incurred in the performance of work
      - 6.1212 Insurance premiums (service component only) relating to current and capital goods to cover losses incurred in the course of business
      - 6.1213 Bank fees
      - 6.1214 Levies and subscriptions to economic and professional organizations (e.g. chambers of commerce etc.)
      - 6.1215 Fees for medical examination of workers necessitated by their employment
      - 6.1216 Costs of engaging labour (advertising, recruitment)
      - 6.1217 Fees for forestry consultants, surveyors, accountants, tax consultants, lawyers, etc.
      - 6.1218 Costs of soil analyses
      - 6.1219 Purchase of services of scientific research, market research and advertising

- 6.1220 Travel expenses and payments to independent transport firms engaged by the employer for the transport of employees
- 6.1221 Other services, not elsewhere specified

6.2. Other

- 6.21. Water rates (1) (business use) related directly or indirectly to the quantity of water consumed
- 6.22. Expenditure on forestry newspapers and journals
- 6.23. Intermediate consumption, not elsewhere specified

7. VAT under-compensation (2)

- 
- (1) Water rates paid purely as a tax and unrelated to the quantity of water consumed are recorded under "Taxes linked to production other than VAT".
  - (2) Unless included in item 6.23.



## APPENDIX VIII

### FORESTRY GROSS FIXED CAPITAL FORMATION

1. Afforestation and conversion
  - 1.1. New afforestation
  - 1.2. Conversion of coppice into forest
  - 1.3. Expenditure on subsequent improvements and tending of plantations for new afforestation and conversion during the first five years
2. Machinery and other equipment
  - 2.1. Rotovators and other two-wheeled plant
  - 2.2. Machinery and plant for soil preparation, sowing, planting, cultivation, fertilization and protection of plants (e.g. motor-powered hoes and cultivators, clearing machines)
  - 2.3. Machinery and equipment for felling trees and transporting timber within the forest, with the exception of transport equipment (motor-powered saws, bark-stripping, timber shredding and conveying machines, spraying installations for wood preservations)
  - 2.4. Machinery and installations on forestry premises
    - 2.41. For forestry seeds and plants (e.g. sorting, ventilation, storage of products)
    - 2.42. Others (e.g. for irrigation)
3. Transport equipment
  - 3.1. Forestry tractors (1)
  - 3.2. Other vehicles (motor cars, estate cars, lorries)
  - 3.3. Trailers
4. Forestry buildings
  - 4.1. New buildings
  - 4.2. Renovations (large-scale repairs) and improvements
5. Other construction including soil improvement
  - 5.1. Consolidation of fragmented holdings (costs borne by forestry)
  - 5.2. Road construction
  - 5.3. Clearance
  - 5.4. Drainage
  - 5.5. Other construction engineering working, not elsewhere specified
6. Net purchases of existing reproducible fixed capital goods

---

(1) As defined in Council Directive 80/720/EEC of 24 June 1980 viz "any motor vehicle fitted with wheels or endless tracks and having at least two axles, the main function of which lies in its tractive power and which is specifically designed to tow, push, carry or power certain tools, machinery or trailers intended for . . . forestry use."

7. Other

- 7.1. Costs incurred in the transfer of ownership of land
- 7.2. Gross fixed capital formation, not elsewhere specified

8. VAT under-compensation

**APPENDIX IX**

**TABLES FOR THE COMPILATION  
OF THE EAA**



BRANCH  
FINAL OUTPUT/QUANTITIES  
prov./def.data\*

[ ] COUNTRY

YEAR [ ]

Code no.	Product	Quantities	Resources					Uses										Change in stocks			Final output of the branch					
			Gross production	Wastage	Usable production	Initial stocks	Total available resources	Intra-branch consumption				Processing by producers	Own consumption	Sales		Own-account produced fixed capital goods	Final stocks	Total	Additions to stocks	Withdrawals from stocks		Change in stocks				
								Seed and planting stock	Feeding-stuffs	Other: e.g. eggs for hatching	Total			Domestic sales	Sales abroad											
								6q	7q	8q	9q (6q/8q)			10q	11q								12q1	12q2	13q	14q
1q	2q	3q(1q-2q)	4q	5q (3q+4q-9q+15q)	6q	7q	8q	9q (6q/8q)	10q	11q	12q1	12q2	13q	14q	15q (10q/14q)	(A)	(W)	16q (14q-4q) (A-W)	17q (10q/13q+16q)							
160	Fresh vegetables																									
162	of which : Cauliflowers																									
175	Tomatoes																									
185	Other fresh vegetables																									
203	Fresh fruit (excluding citrus fruit, grapes and olives)																									
211	of which : Dessert apples																									
213	Dessert pears																									
218	Peaches (including nectarines)																									
225	Other fresh fruit																									
230	Citrus fruit																									
233	of which : Sweet oranges																									
235	Mandarines																									
237	Lemons																									
239	Other citrus fruit																									
260	Tropical fruit																									
300	Grapes																									
301	of which : Dessert grapes																									
305	Other grapes																									
310	Grape must and wine																									
311	of which : Table wine																									
312	Quality wine																									
320	Olives																									
321	of which : Table olives																									
325	Other olives																									
330	Olive oil																									

\* Delete which is inapplicable.



BRANCH  
FINAL OUTPUT/PRICES AND VALUES  
prov./def.data\*

[ ] COUNTRY

YEAR [ ]

Code no.	Prices and values Product	Prices							Values												
		Price/metric ton	Processing by producers	Own consumption	Sales		Own-account produced fixed capital goods	Change in stocks	Processing by producers	Own consumption	Sales	Own-account produced fixed capital goods	Change in stocks			Final output of the branch	Final output of the branch				
					Domestic sales	Sales abroad							Additions to stocks	Withdrawals from stocks	Change in stocks		17v	at 1980 prices		at 1985 prices	
																		12p1	12p2	(A)	(W)
105	Cereals (excluding rice)																				
110	Wheat and spelt																				
111	Wheat																				
112	Soft wheat																				
113	Durum wheat																				
114	Rye and meslin																				
115	Rye																				
116	Barley																				
117	Oats and summer cereal mixtures																				
118	Oats																				
120	Maize																				
121	Other cereals (excluding rice)																				
125	Rice (in the husk or paddy)																				
130	Pulses																				
135	Root crops																				
136	Potatoes																				
137	Sugar beet																				
138	Other root crops																				
140	Industrial crops																				
141	Oil seeds and oleaginous fruit (excluding olives)																				
142	of which : Rape and turnip rape seed																				
145	Sunflower seed																				
148	Soya beans																				
149	Other oleaginous products																				
150	Fibre plants																				
155	Unmanufactured tobacco																				
156	Hop cones																				
157	Other industrial crops																				

\* Delete which is inapplicable.

[5] ECONOMIC ACCOUNTS FOR AGRICULTURE  
 [ ] COUNTRY

BRANCH  
 FINAL OUTPUT/PRICES AND VALUES  
 prov./def.data\*

TABLE [1]  
 YEAR [ ]

Code no.	Product	Prices and values		Prices				Values										
		Price/metric ton	Processing by producers	Own consumption	Sales		Own-account produced fixed capital goods	Change in stocks	Processing by producers	Own consumption	at current prices			Final output of the branch	Final output of the branch			
					Domestic sales	Sales abroad					Sales	Own-account produced fixed capital goods	Change in stocks			at 1980 prices	at 1985 prices	
													Additions to stocks		Withdrawals from stocks			Change in stocks
	10p	11p	12p1	12p2	13p	16p	10v	11v	12v1+12v2	13v	(A)	(W)	15v (A - W)	17v	17v80	17v85		
160	Fresh vegetables																	
162	of which : Cauliflowers																	
175	Tomatoes																	
185	Other fresh vegetables																	
203	Fresh fruit (excluding citrus fruit, grapes and olives)																	
211	of which : Dessert apples																	
213	Dessert pears																	
218	Peaches (including nectarines)																	
225	Other fresh fruit																	
230	Citrus fruit																	
233	of which : Sweet oranges																	
235	Mandarines																	
237	Lemons																	
239	Other citrus fruit																	
260	Tropical fruit																	
300	Grapes																	
301	of which : Dessert grapes																	
305	Other grapes																	
310	Grape must and wine																	
311	of which : Table wine																	
312	Quality wine																	
320	Olives																	
321	of which : Table olives																	
325	Other olives																	
330	Olive oil																	

\* Delete which is inapplicable.

BRANCH  
 FINAL OUTPUT/PRICES AND VALUES  
 prov./def.data\*

Code no.	Prices and values Product	Prices						Values														
		Price/metric ton	Processing by producers	Own consumption	Sales		Own-account produced fixed capital goods	Change in stocks	Processing by producers		Own consumption	Sales	Own-account produced fixed capital goods	Change in stocks			Final output of the branch	Final output of the branch				
					Domestic sales	Sales abroad			10v	11v				12v1+12v2	13v	Additions to stocks		Withdrawals from stocks	Change in stocks	17v	17v80	17v85
380	Other crops and crop products																					
381	of which : Fodder plants																					
382	Nursery plants																					
383	Vegetable materials used primarily for plaiting																					
384	Flowers and ornamental plants																					
385	Seeds																					
386	Other																					
100	FINAL CROP OUTPUT																					
407	Cattle (including calves)																					
440	Pigs																					
460	Equines																					
470	Sheep and goats																					
477	Poultry																					
501	Other animals																					
401	TOTAL ANIMALS																					
515	Milk (untreated)																					
525	Eggs																					
561	Raw wool																					
562	Other animal products																					
564	of which : Silkworm cocoons																					
510	TOTAL ANIMAL PRODUCTS																					
400	FINAL ANIMAL OUTPUT																					
001	Contract work at the agricultural producer stage (New Plantations).																					
008	Adjustment																					
010	TOTAL FINAL OUTPUT																					

\* Delete which is inapplicable.

Code no.	Values Headings	Purchases of goods and services of intermediate consumption			Change in stocks of intermediate consumption			Usage of goods and services of intermediate consumption		
		at current prices	at 1980 prices	at 1985 prices	at current prices	at 1980 prices	at 1985 prices	at current prices	at 1980 prices	at 1985 prices
710	Seeds and plants									
740	Livestock and animal products									
750	Energy; lubricants									
760	Fertilizers and soil improvers									
790	Plant protection products, herbicides, insecticides and pesticides									
798	Pharmaceutical products									
800	Feedingstuffs									
840	Material and small tools; maintenance and repairs									
870	Services									
890	Other									
012	VAT under-compensation									
013	Adjustment									
015	Total									

\* Delete which is inapplicable.

Code no.	Heading	Values		
			at current prices	at 1980 prices
010	Final output			
015	- Intermediate consumption			
020	Gross value added at market prices			
021	+ Subsidies			
024	- Taxes linked to production excluding VAT			
029	+ VAT over-compensation			
030	Gross value added at factor cost			
035	- Depreciation			
036	Equipment			
037	Construction			
040	Net value added at factor cost			
041	- Compensation of employees			
045	Net operating surplus			
046	- Rent and other payments in cash or in kind			
047	- Interest			
048	Net income from total agricultural activity (040 - 046 - 047)			
049	Net income from family agricultural activity (045 - 046 - 047)			

\* Delete which is inapplicable

Code no.	Heading	Values		
			at current prices	at 1980 prices
910	New plantations			
920	Livestock			
930	Machinery and other equipment			
950	Transport equipment			
961	Farm buildings			
971	Other construction with the exception of soil improvements			
973	Soil improvements			
980	Net purchase of existing reproducible fixed capital goods			
981	Other			
051	VAT under-compensation 1)			
050	Adjustment			
053	Total (incl. VAT under-compensation)			
985	Net purchases of land			

1) VAT under-compensation = non-deductible VAT.

\* Delete which is inapplicable.

**APPENDIX X**

**TABLES FOR THE COMPILATION  
OF THE EAF**



Code no.	Product	Quantities	Prices	Values		
				at current prices	at 1980 prices	at 1985 prices
620	CONIFEROUS TIMBER FOR INDUSTRIAL USES					
621	Coniferous long timber					
626	Coniferous stackwood					
630	NON-CONIFEROUS TIMBER FOR INDUSTRIAL USES					
631	Long timber (non-coniferous)					
636	Stackwood (non-coniferous)					
640	FIREWOOD (CONIFEROUS AND NON-CONIFEROUS)					
600	TOTAL RAW WOOD					
645	OTHER PRODUCTS					
001	CONTRACT WORK AT THE FORESTRY PRODUCER STAGE (AFFORESTATION AND CONVERSION)					
008	Adjustment					
010	TOTAL FINAL OUTPUT					

\* Delete which is inapplicable.

ECONOMIC ACCOUNTS FOR FORESTRY

BRANCH  
INTERMEDIATE CONSUMPTION  
prov./def.data\*

TABLE  2
 COUNTRY
YEAR  

Code no.	Values Headings	Purchases of goods and services of intermediate consumption			Change in stocks of intermediate consumption			Usage of goods and services of intermediate consumption		
		at current prices	at 1980 prices	at 1985 prices	at current prices	at 1980 prices	at 1985 prices	at current prices	at 1980 prices	at 1985 prices
710	Seeds, seedlings and cuttings									
750	Energy; lubricants									
760	Fertilizers and soil improvers									
790	Plant protection products, herbicides, insecticides and pesticides									
840	Material and small tools, maintenance and repairs									
890	Other									
012	VAT under-compensation									
013	Adjustment									
015	Total									

\* Delete which is inapplicable.

Code no.	Heading	Values		
		at current prices	at 1980 prices	at 1985 prices
010	Final output			
015	- Intermediate consumption			
020	Gross value added at market prices			
021	+ Subsidies			
024	- Taxes linked to production excluding VAT			
029	+ VAT over-compensation			
030	Gross value added at factor cost			
035	- Depreciation			
036	Equipment			
037	Construction			
040	Net value added at factor cost			
041	- Compensation of employees			
045	Net operating surplus			
046	- Rent and other payments in cash or in kind			
047	- Interest			
048	Net income from total agricultural activity (040 - 046 - 047)			
049	Net income from family agricultural activity (045 - 046 - 047)			

\* Delete which is inapplicable.

Code no.	Heading	Values		
		at current prices	at 1980 prices	at 1985 prices
919	Afforestation and conversion			
930	Machinery and other equipment			
950	Transport equipment			
961	Forestry buildings			
971	Other construction incl. soil improvements			
980	Net purchases of existing reproducible fixed capital goods			
981	Other			
051	VAT under-compensation 1)			
050	Adjustment			
053	Total (incl. VAT under-compensation)			
985	Net purchases of land			

1) VAT under-compensation = non-deductible VAT.

\* Delete which is inapplicable.





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The present manual is the result of further systematic development from these early beginnings; it aims to provide a coherent, practical and readily comprehensible tool for the compilation and use of the EAA and the EAF.



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