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DEVELOPMENTS IN THE AREA OF ECONOMIC ACCOUNTS FOR AGRICULTURE VERSUS  
MICRO-LEVEL - TOTAL INCOME OF AGRICULTURAL HOUSEHOLDS AND TO WHAT EXTENT  
THEY ARE DEPENDENT ON AGRICULTURAL ACTIVITIES

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Summary

The simple mono-active family-farm model that underlies much of agricultural statistics is not a satisfactory representation of the complex structure of EU farming. Many policy issues require a broader view of the economic activities of farm operators. The agricultural household as a basic unit is of importance not only to statistics on personal income but also to farm business data and capital balance sheets.

**I. Introduction**

1. Statistics are important to allow the issues that confront the industry to be defined and to monitor the effectiveness of policies designed to

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address them. In today's world both the causes of agricultural problems and the policies that attempt to address them are seen to be primarily international in nature. In such a context statistics are required that are not only relevant, accurate, and timely, but they must also be comparable across national boundaries. Without this, the important tasks of contrast and aggregation cannot be carried out. In the EU Eurostat has the responsibility for providing statistical leadership and co-ordinating the discussions among the existing fifteen EU Member States that lead to the development of harmonised methodologies by consent. It also promotes discussions with Candidate Countries (CC) to prepare their accession. Other bodies (such as the OECD and FAO) are also important in maintaining contact with the international context in which the EU's statistical system operates (Lindner, 1998).

2. In the EU each Member State has a unique set of national circumstances in which to apply the framework provided by the agreed methodologies, including a range of data sources. Consequently, in order to facilitate progress in applying common definitions and coverages, flexibility in matters such as data collection has to be permitted. Almost inevitably, this introduces the danger of less than complete harmonisation in the statistics, as compromises will often be needed when fitting existing national data sets to EU requirements. However, another viewpoint is possible - that the flexibility allowed to Member States to find solutions based on national circumstances permits the highest feasible levels of harmonisation and reliability to be achieved.

3. The main EU monetary agricultural statistics currently comprise the following modules (Calo, 1998; Hill, 1998b)<sup>1 2</sup>

- The **Economic Accounts for Agriculture (EAA)** drawn up for each Member State and the EU-15 as satellites within the framework of national accounts. The EAA methodology contains some departures from the treatment of agriculture in national accounts (reconcilable using a bridge account) to make the EAA more appropriate for use in a policy context. Important adjuncts to the EAA are
  - A suite of income indicators
  - Labour input statistics, which are used in the estimation of these income indicators
  - Regional versions of the accounts in a reduced form
  - The SPEL model (Sectoral Production and Income Model)
  
- **Agricultural price statistics** for agricultural commodities and inputs, used in their own right within the monitoring of policy for these commodities and in relation to the calculation of the EAA.

- The microeconomic **Farm Accountancy Data Network** (FADN, or RICA), comprising accounts collected annually from about 57,000 agricultural holdings, and referring to the agricultural business activities taking place on these holdings. Incomes from farming are estimated (per holding and per unit of labour input). The FADN provides microeconomic data necessary to complement the aggregate results of the EAA, albeit with a time lag and without complete harmonisation between the two levels (of coverage etc.). FADN activities are co-ordinated by the Commission's Directorate-General for Agriculture, not by Eurostat. Publication of results has not taken the form of an annual cycle, though summary results appeared in the *Agricultural Situation in the European Union*; from 1998 standard tables have been available in the *Forum* domain of the Commission's internet site.
- **Income accounts for the Agricultural Households Sector (IAHS statistics)**, this sector being defined so as to include all households for which independent activity in agriculture is the main source of income of the household reference person (normally the head of household). The account covers all sources of household income and deductions, leading to Net Disposable Income, which may be expressed per household, per household member and (by using an equivalence scale) per consumer unit. Supplementary accounts for some countries exist with a broader coverage that includes all households in which at least one member has some income from farming.

4. It should be noted that almost all EU-level statistics are dependent on national data systems, and that national statistics drawing on the same basic data will usually be prepared and published independently, though often using methodologies that differ in detail from the EU system.

5. Both the EAA and FADN / RICA are based on units that are "artificial" in that they do not correspond to real institutional units. Only the IAHS statistics, being based on households, are of this sort. This point is developed below.

## II. Statistical needs

6. Perhaps the weakest part of any publicly financed statistical system is the establishment of what output is required. The need to "develop and improve" agricultural statistics, referred to in the title of this session, implies that the present output may be less than optimal, and that a gap exists between requirement and provision. The users will be largely, though not exclusively, the public sector, in a EU agricultural context predominantly the staff of the Commission's DG VI concerned with the implementation of agricultural policy. However, their expressed demand for

statistics will not be neutral; policymakers cannot be expected to press for, on an even-handed basis, statistics that can be used to challenge their established policy or to promote alternative actions that they have discarded. The existence of some mechanism by which the needs of other users can be articulated should help indicate a more socially-preferred statistical mix; these users will include national governments, administrators concerned with regional development, environment policy etc., the private sector and academic researchers. A danger where the provision of statistics is increasingly dependent on finance from major institutional users (rather than financed directly) is that the statistical authorities may be constrained in their ability to service the "public good" aspect and may find their independence threatened.

7. In the US there is a systematically organised consultation process between the providers of agricultural statistics and users and in north America a history of consultation and public debate (see, for example, (AAEA, 1972; Baum and Johnson, 1986; Bonnen, 1975; Loyns *et al.*, 1983; Loyns *et al.*, 1986). A similar exercise was conducted by Eurostat in 1997 and 1998 (FADO)(Eurostat, 1997d). This provided a good example of the difference between an "internal" and an "external" assessment of statistical needs; while many commentators stated that, in view of the stated aims of EU agricultural policy, statistics should be available on the overall income situation of agricultural households as a supplement to (not a substitute for) existing indicators of the rewards from agricultural production, this call has not received strong and unambiguous support from the agricultural policymakers in the Commission.

8. Any indication of the direction in which development and improvement should take place must inevitably be subjective and reflect the background of the commentator. The writer's view, expressed here, is primarily that of a policy analyst and only secondarily as a participant in the development and provision of statistics.

### **III. Problems presented at the present level of statistical development**

9. In the short term there are various practical issues that have to be tackled by the EU's statistical system. None go beyond the present level of conceptual development.

#### Aggregate production accounts

10. A revised methodology for the Economic Accounts for Agriculture (EAA97) has been agreed (Eurostat, 1997b) and is to be implemented by Member States in 1999. The changes, made to bring the EAA in line with changes in the underlying system of national accounts (Eurostat, 1996a; UN, 1993), has involved a shift in many basic concepts and approaches that have their roots in aggregate agricultural accounting practices established more than fifty

years ago. Furthermore, the reinterpretation of what forms the agricultural industry (and the abandonment of the "national farm" concept) and certain other decisions in the new methodology (such as the treatment of depreciation of breeding livestock) have introduced conventions that are not found universally acceptable<sup>3</sup>. No doubt there will be practical difficulties in adjusting to the new system. Nevertheless, the target at which agricultural statisticians in EU Member States and in Candidate Countries have to aim is now clear. The EAA97 is likely also to be adopted by the OECD as the basis on which it collects and publishes aggregate economic accounts for its wider coverage, though some small modifications and extensions are probable. Labour input statistics, used when generating income indicators per work unit, are concerned with improving quality, and in particular in clarifying the distinction made between non-hired and family labour; in future the emphasis will be on a breakdown between hired and non-hired rather than family / non-family, the working relationship being the critical issue, not familial links (Eurostat, 1997a).

#### Farm-level production accounts

11. The EU's FADN is undergoing two forms of development. First, it is in the process of adopting a new Farm Return that is expected will include *inter alia* optional questions on the non-farm income of the holder and spouse. Second, candidate countries are setting up mechanisms, including farm surveys, to enable FADN's coverage is to be widened when they accede to the EU (Eurostat, 1997a).

12. OECD countries that are not EU Member States frequently also have farm surveys (such as the US Agricultural Resource Management Study, formerly called the Farm Costs and Returns Survey). Given that the types of data they collect and the concepts used in drawing up farm accounts are basically similar to those of FADN, it appears feasible for an international set of microeconomic data to be built up for purposes of income study, business analysis and for making comparison between countries to help answer policy-related questions. The OECD's Structural Indicators Project (SIP) goes partly in this direction. However, for international comparisons to be valid the results should be harmonised, implying the agreement of methodology. The OECD could perform a useful role in assessing the extent to which this is feasible, and the nature of adjustments that might be required.

#### Statistics on agricultural households - aggregate position

13. Aggregate statistics showing the overall income of the agricultural households sector, the sums taken by personal taxation and other forms of non-optional distribution, and the residual net disposable income are of relatively recent origin in the EU, though having a longer history at national levels in Germany and France (Hill, 1988; Hill, 1996). Reports of a mainly descriptive nature appeared in 1992 and 1995, the regular series of statistics only beginning in 1996 (Eurostat, 1997c; Eurostat, 1998). Based

within the framework of national accounts, these IAHS statistics are, in nature, a disaggregation of the all-households distribution of income account into socio-professional groups, of which agricultural households form one group (Eurostat, 1996b). This allows comparisons to be made between agricultural households and other socio-professional categories in terms of income per household, per household member and (by using equivalence scales) per consumer unit. IAHS statistics have already provided valuable information on issues such as the extent to which farm households rely on other forms of income, how off-farm income adds stability to the total, how the burdens of taxation and social contributions differ between Member States and how they impinge relative to the average household and, perhaps most significantly, the generally favourable level of income enjoyed by farm households compared with national averages. For the large numbers of households that operate farms but where the holder's main income is from some other (non-farming) source, on average agriculture provides only a very minor share of their households' total income, an important finding when considering how agricultural policy reform might affect farm operators.

14. The main short-term objective in the EU is to fill gaps in the coverage and to bring results for each Member State up to date by a system of extrapolation. At present countries vary widely in the number of years covered, with few having results that extend to year  $t-2$ , a major constraint to the use of these statistics in an agricultural policy context. Because these IAHS statistics were new for most countries and the availability of basic data varied, full harmonisation of results has not yet been reached. This applies not only in terms of the items covered in the calculation of disposable income but also, and probably more importantly, in the method for classifying households; some derogation was allowed for countries that could only use a system based on the main occupation of the head of household. Allied to this filling out of the agreed methodology, there are some refinements that are under consideration, including (a) modifying slightly the definition of what constitutes disposable income in the interests greater harmonisation of results (by excluding items that are difficult to estimate in some countries); (b) revising the definition of a household so that it is confined to the "core" of members that form a cohesive unit for income and expenditure pooling (typically parents and dependent children and by excluding other adults who are financially independent). Again, the OECD could serve a useful role in collecting IAHS statistics for its broader coverage of countries using the methodology that has already been firmly established in the EU (OECD, 1997).

#### Statistics on agricultural households - the microeconomic situation

15. No EU-level statistics current exist at the household level that can be used to complement the aggregate IAHS statistics (in the way that FADN complements the EAA). This represents a major information gap. Fundamental questions in policy remain unanswered. Despite the weight given to the notion of a *fair standard of living* for the *agricultural community* in policy

statements stretching from the 1957 Treaty of Rome to the 1997 Agenda 2000, at present it is not possible, for example, to explore the incidence of low incomes among households with farms, on what types and sizes of farms and in which regions the low income cases are found, or the socio-economic nature of their operators (age, education etc.) or to see how non-farm income compensates for low farm income. In view of the heterogeneity of the occupiers of farms it is no longer safe to assume that the level of income from farming is any reliable guide to the total income of the household. The lack of harmonised microeconomic data means that findings (reviewed in (Blandford, 1996; Hill, 1996; OECD, 1995)) are based whatever information can be found, so that coverage is geographically patchy and handicapped by wide methodological disparities on key variables.

16. The issues to be faced in filling this gap are not primarily conceptual. The IAHS statistics have already made much of the required methodological developments, though in matters such as income definition certain adjustments may be required (on matters such as treatment of insurance payments and receipts, transfers between households etc.). Rather, the problems are largely associated with the disparate data systems that exist in Member States. These take a variety of forms - tax records, household budget surveys, administrative registers, farm accounts surveys, some co-ordinated and others not. Some Member States have several good sources, others none (see Table 1). Eurostat could perform a useful role in setting up a target methodology to which Member States should aim, and could start assembling statistics on this basis for countries where microeconomic data already exist. For the other countries without any satisfactory data source, the gap cannot be filled without significant progress at national level. Because of the universal relevance of microeconomic data to policy issues in developed countries, the OECD could consider how to co-ordinate such statistics for all its Members using a harmonised methodology.

#### **IV. Proposals for strategic developments and improvements**

17. The EU is well provided with monetary statistics on agricultural production. They are based on methodological foundations that have served needs of policy makers and analysts since the outset of the EU and, in national forms, for at least fifty years. However, the passage of time has seen changes in the nature of the agricultural industry and of the agricultural community that have eroded the assumptions and simplifications that link the real world to the statistics that purport to represent it. In addition, the mix of problems that policy is attempting to address has evolved with, in particular, a reduction in the relative importance of issues that are centred on the supply of agricultural products (expansion of food supply, increased self-sufficiency, improved productivity etc.). This tendency for conceptual obsolescence in agricultural economic statistics has not engendered such an intense debate in the EU as was seen in the US and Canada, though a case could be made that its urgency is now acute.

**Table 1. Data sources on the overall income situation of agricultural households in EU Member States and other selected OECD countries**

<b>EU Member States</b>	<b>Farm accounts survey</b>	<b>Family (household) Budget Surveys</b>	<b>Taxation records</b>	<b>Other</b>
Belgium				
Denmark	*		*	
Germany	*	*	*	*
Greece				
Spain				
France		*		(*)
Ireland		*		(*)
Italy				*
Luxembourg	(*)			*
Netherlands	*		*	
Austria	*	*		
Portugal				
Finland	*	*	*	
Sweden	(*)		*	
United Kingdom	*		*	(*)
<b>Other OECD Countries</b>				
USA	*	*		*
Canada	*	*	*	
Australia	*			(*)
Japan	*			
Mexico		*		
New Zealand	*			(*)
Norway	*		*	
Switzerland	*			

\* potential or actual regular data source on household income

\*\* occasional data source

Summarised from OECD (1997) and derived from Hill (1988) and OECD (1995)

18. Failures in the statistical system are usually looked for in the measurement stage data gathering (sample size, bias of various forms etc). However, insidious but more fundamental failings may happen at the stages of conceptualisation and operationalisation. The remaining part of this paper is concerned with a number of specific issues that appear to constitute the basis for development and improvement in economic statistics.

The basic unit in production statistics and the agricultural industry

19. At aggregate level the agricultural branch concept of the EAA as applied up to 1998 was one strictly confined to covering agricultural



production undertaken by "fictitious" Units of Homogeneous Production. Though an abstraction, and presenting some problems in its calculation (especially on the input side), it had the virtue of being easy to grasp by the non-specialist user of statistics. The revisions under EAA97, in which the agricultural "industry" comprises agricultural Local Kind-of-Activity Units (LKAUs, also termed *establishments*), while making changes to include some secondary activities, in practice leave the general approach substantially the same because of the attitude taken to "separability" between agricultural and other forms of production (which is itself somewhat arbitrary) and additional conventions adopted as to what can be considered as a non-separable secondary activity (Eurostat, 1997b). Similarly, in the FADN/RICA the coverage is of agricultural activity that takes place on holdings; with only very limited exceptions, non-agricultural activities that the farmer engages in, even if they take place on the farm, are currently excluded.

20. The point here is that such an approach is artificial and increasingly divorced from the reality of firms (or enterprises) that engage in agricultural activity. The fictitious LKAU unit of the EAA, adopted primarily to conform with national accounts methodology, and the agricultural business of FADN only coincide with reality if the farm operators work solely on the holding in producing primary-stage agricultural commodities, and engage in no other forms of productive activity on or off the holding. Though this simple model of agriculture may hold in some countries,<sup>4</sup> it is unlikely to be valid for the EU.

21. Among EU households that operate farms, a significant proportion (at least a third) engage in non-agricultural activity; where data exist over time, it seems that this pluriactivity is an increasing phenomenon. Diversification has long been a declared policy aim, and is of heightened importance under the Agenda 2000. The approach based on fictitious units excludes factors that heavily influence decisions on production, land and labour use, investment and environmental practice and levels of income. For example, the persistent negative Family Farm Incomes seen among Denmark's cereal producers can only be explained by knowing the pattern of intergenerational asset transfer, the interest burden incurred and the use of off-farm activity to service this debt. When statistics rely on concepts that no longer bear a close relationship with reality, there is a danger that they become unsuitable for informing policy and, at times, can be quite misleading.

22. In addition to this explanatory limitation there is a problem with data; especially in microeconomic sources, the estimation of accounts based on "artificial" units often requires figures to be carved out from those that relate to the broader activities of "real" institutional units, with the inevitable intrusion of arbitrariness. Households with agricultural holdings are units that are involved both in production and in consumption, and well-known difficulties arise if attempts are made to separate the two functions.

Thus data systems often assume that all interest payments relate to production activities and none to the finance of consumption. However, this is not a good reason for introducing a further potential source of distortion by attempting to partition the global production activities of households into their agricultural and their non-agricultural components.

23. An important step towards restoring the link between statistics and the real world would be to avoid the artificial splits in the activities of basic units of production that the present methodologies require. This could be achieved by

- **at aggregate level**, introducing new production accounts for the agricultural "sector" comprising real institutional units (households and corporate enterprises) whose principal activity was agricultural production (an approach advocated by the FAO (FAO, 1996). Secondary non-agricultural activities would be included in the output of these units unless there was a clear case that separation took place in the management of the other activities at the unit level. Any agricultural activity that was part of the output of units that were not agricultural (on the basis of their main activity) would be lost to agriculture
- **at microeconomic level**, including within the coverage of the FADN all the production activities of the business unit, not just the present narrower range. Businesses whose principal activity was not agricultural need not be covered in data collection, bringing the macro and micro approaches into line. In principle, this applies equally to incorporated and unincorporated businesses. For firms operated by households, though classification would depend on their independent activity, the principle of avoiding artificial splits implies that income from dependent activity (which also can be expected to impinge on management and investment decisions) should also be covered.

24. Though there would be continuing necessity to generate a production account based on agricultural LKAUs for the purposes of contributing to national accounts, it is less certain that the satellite EAA would still be needed in the longer term. There would be the additional virtue that the proposed "sector" coverage might be more intelligible; as a concept the new EAA97 agricultural "industry" is far less easy for the non-specialist statisticians to come to grips with than the former "branch" concept.

Capital balance sheet data

25. Perhaps the most extreme form of artificiality is encountered with capital balance sheets. These have several potential uses in policy analysis, two of which are particularly important; (a) to capture the impact on the net worth of the agricultural sector of changes in support spending

(which may not be fully reflected in income) and (b) as the basis of indicators of business stress and viability. Though not yet presented among the series of capital accounts for the EU (Eurostat has plans to do so), such sheets are prepared at national level (for example, in Agriculture in the United Kingdom). FADN collects data on the asset value and debts of its surveyed holdings<sup>5</sup>. The OECD has plans to collect harmonised balance sheet statistics (OECD, 1997).

26. Both the aggregate and microeconomic approaches attempt to consider only agricultural assets (that is, those used in agricultural production) and agriculturally-related debt. Asset ownership and debt can only be held by real economic units, predominantly households<sup>6</sup> in current EU agriculture, and not by the fictitious "industry" or "farm business". The creation of an agricultural-only capital balance sheet requires heroic assumptions in order to partition the total capital position of farm operators into agricultural and non-agricultural components that mirror those of the present income measurement systems, referred to above. While it may be quite easy to designate assets as being agricultural in nature and hence draw up the positive side of the balance sheet (though the treatment of tenanted land requires special care), the fungible nature of debt implies that no such simple breakdown is possible on that side of the sheet.

27. Even the principle of such a division is subject to criticism. Briefly, when making allocative decisions the institutional unit will not draw any impenetrable barrier between its agricultural and other assets (and debts). Hence in the case of agricultural households, it makes more sense to measure balance sheets that embrace all assets (those used in production in agriculture and other independent activities, dwellings and other personal assets) and all debts. Empirical evidence suggests many farm households hold considerable non-farm assets, though such information is not available systematically. However, a move in this direction requires consideration of which institutional units are covered. As with IAHS statistics, it would not be sensible to include all the assets and debts of every institutional unit involved with agricultural production, in however minor a way. A selective approach is more appropriate, perhaps using the IAHS criterion of income dependency, to include only those institutional units that are deemed to be agricultural in nature.

The challenge of non-household (family) forms of agricultural production

28. Farms operated as corporations, or similar business forms with their own legal identity, are only of numerical significance in a few Member States. The EU's Farm Structure Survey is not a reliable source of data on this as, in several countries, companies that have family ownership patterns very similar to those of partnerships are, in practice, returned as unincorporated (Eurostat, 1986). There is some empirical justification in their management behaviour patterns for this convention (Harrison, 1975). Nevertheless, the enlargement of Germany has brought with it large-scale

farms which are not like family businesses in their structure. More of this type will enter the EU with enlargement.

29. The crux of the problem they present is how labour is treated. Both the EAA and FADN / RICA have used measures of residual income that, in addition to subtracting from the value of output all other payments, deduct the costs of hired labour. How the labour force on these large units is classified - as dependent workers paid a wage (which would not necessarily preclude additional payments related to the enterprise profit) or as independent workers (non-hired, or self-employed) - is critical to the size of the residual income. It is also affects the number of non-hired ("family") work units over which it is conventional to express this income; technically there may be no non-hired labour, and to assume that a single manager is the nominal "holder" is likely to create an income-per-person that is of extreme proportions<sup>7</sup>. In the IAHS statistics hitherto it has been assumed that the agricultural households sector does not include households headed by a reference person whose main income source is wages earned from working in a farming business; thus according to this definition there may be no agricultural households associated with these large farming units. Clearly, solutions need to be sought urgently on the appropriate treatment of these households within each approach to income measurement.<sup>8</sup>

## V. Conclusions

30. Unlike some proposals that might have been put forward (such as the integration of economic and environmental accounts, foreseen in the SNA93), most of the developments and improvements discussed here are quite modest in conceptual terms. They relate mainly to the data system. Within the EU the proposals concern some rebalancing of emphasis and the filling of gaps data, particularly in household sector statistics and at microeconomic level. An extended role for the OECD is suggested in co-ordinating an enlarged range of internally comparable policy-relevant statistics.

31. A line running through this article is the need to choose a basic unit for the statistics that bears a closer relationship with the particular policy purpose the statistics are supposed to inform. Increasingly this points to a central role for statistics based on the household. Policy on the *fair standard of living* of agricultural households, still the central plank of the CAP, clearly demands attention be given to the household as the unit and all its resources be covered; and the important policy questions require microeconomic data in addition to what may be available for the whole sector. Satisfactory analysis of business behaviour (including capital balance sheets) requires the entirety of business activity to be encompassed, not just that part classed as agricultural; where farms are unincorporated this too implies the household should be the basic statistical unit. While the centrality of the household in agricultural statistics is usually seen as a characteristic of developing economies, a strong case exists also in the

industrialised countries. However, a greater weight on household-based statistics often involves difficult decisions on which households are to be included. For farms that have their own legal status, further work seems necessary to clarify how best to treat them in agricultural statistics.

32. While economy in the statistical system is laudable, danger arises when statistics appropriate to particular uses are pressed into service for other purposes. For example, changes in the EAA-related indicators of the aggregate incomes from agricultural production, though attractive to users because of timeliness associated with their manner of calculation, are not a reliable proxy for changes in the overall or disposable incomes of agricultural households or their standards of living. The real world is far more complex than the implied model assumes. Provisional inferences concerning total incomes based on what is only a partial contribution to total incomes should only be drawn in the context of a wider appreciation of income composition. Users may wish to trade-off timeliness for relevance, but statisticians cannot avoid some responsibility for the interpretation and explanation of results, a role that may make policymakers' tasks more complex and therefore is not particularly welcomed. However, such an iterative process between users and producers of statistics is fundamental to the development and improvement of agricultural statistics.

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END NOTES

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- 1/ Other statistics not primarily economic in nature include production statistics for crops and livestock, and the agricultural (farm) structure survey.
- 2/ All but the last form part of the first wave of the *Aquis Communautaire* that candidate countries are expected to fulfil.
- 3/ Currently the EAA utilise the concept of the agriculture "branch", consisting of Units of Homogeneous Production (UHPs) and covering all agricultural production in whatever type of unit (Eurostat, 1992). This has been replaced, in the revised EAA97 methodology (Eurostat, 1997b), by the agricultural "industry" consisting of agricultural Local Kind of Activity Units (LKAUs). Because of conventions that have been adopted, the "industry" now covers the same totality of agricultural production as under the former system, save that for own-consumption found on very small units (in effect, domestic garden plots) which is no longer included in the "industry". However, there is an extension of coverage in that non-separable secondary activities are now included within the output of the agricultural LKAU, whereas previously they were (in theory) excluded. It is assumed that separability will always be possible where agriculture would otherwise be a secondary activity of a LKAU belonging to some other industrial classification. For criticism of these conventions see (Hill, 1998a; OECD, 1997).
- 4/ The FAO suggests that the "establishment"/ LKAU may, in most cases, be equated with the agricultural holding as defined for the World Census of Agriculture 2000 (FAO, 1996), though the issue of income from dependent activity is not an issue in such a judgement.
- 5/ In the US there are parallels in the Farm Sector balance sheets (aggregate) and the Agricultural Resource Management Study (farm-level).
- 6/ Strictly, members of households.
- 7/ In the FADN there is a noticeable jump in the magnitude of Family Farm Income per Family Work Unit in Germany in the first year in which provisional results are available containing farms in the territory of the former GDR.
- 8/ The IAHS methodology makes provision for income estimates for households that operate farms as companies to be treated as an "add-in"; a similar extension might be provided for household on large-scale businesses in Germany and candidate countries.

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