

Towards a European Framework for Organic Market Information

Proceedings of the Second EISfOM European Seminar
Brussels, November 10 & 11, 2005



Edited by

Markus Rippin, Helga Willer, Nicolas Lampkin, Alison Vaughan

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Foreword

The project European Information System for Organic Markets (EISfOM) is a concerted action funded by the European Commission under key action 5 (Quality of Life) of the 5th Framework Programme for Research and Technological Development (QLK5 2002-02400), running from 2003 to 2006.

The main aim of the project is to develop a framework for the collection and processing of relevant, timely, reliable and comprehensive data on organic production and markets. The project integrates researchers, official and commercial agencies and stakeholders, in order to meet the data needs of policy makers, regulators, farmers, processors, traders, retailers and other interested parties.

At the second EISfOM seminar, which took place November 10th and 11th 2005 in Brussels, a draft framework for a European Information System for Organic Markets was discussed and defined.

In order to achieve the seminar's objectives, much of the work of the seminar took place in five working groups: farm production; farm financial data, prices, consumers/consumption and supply balances/international trade.

The proceedings of the seminar provide coverage of the papers presented. The final suggestion for a European Framework for Organic Markets is currently under preparation and will be published at the project homepage www.eisfom.org early 2006.

Special thanks are due to all those who made the seminar possible. In particular, our thanks go to the European Commission (DG Research) for financial support, furthermore to the speakers, session organisers, chairpersons and rapporteurs for their contributions to the seminar and to these proceedings. Special to Markus Rippin, to Susanne Lux and the ZMP team for the programme coordination, venue arrangements and administrative support, and to the University of Wales, Aberystwyth, for financial administration.

Not least, thanks are due to all the participants who played a major part in the discussions and thereby contributed the success of the event and to the coordinators, chairs and rapporteurs.

Markus Rippin¹, Helga Willer², Nicolas Lampkin³, Alison Vaughan⁴
Bonn, Frick, Aberystwyth, January 2006

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Towards a European Framework for Organic Market Information - Welcome and Opening Speech

Nikiforos Sivenas¹

Ladies and gentlemen, good morning and welcome to Brussels. It is my pleasure to open this second seminar of the “European Information System for Organic Markets” (EISfOM) project.

This project aims at building a framework for reporting valid and reliable data about the European organic sector. During this two-day seminar we will have the opportunity to examine the proposals of the EISfOM research partners for new initiatives for better collection and processing of organic production and market data. These proposals should contribute to meeting the needs of policy makers, farmers, processors, wholesalers and other actors involved in organic markets.

The European Commission fully endorses the importance of valid, reliable and complete statistical data for the further solid and stable development of the organic farming sector. For this very reason, the Commission has shown a great interest in the EISfOM project. As a matter of fact, this project is a concerted action funded by the European Commission under Key Action 5 (Quality of Live) of the 5th Framework Research and Technological Development Programme.

Alongside DG RTD as responsible for research projects, EUROSTAT and DG AGRI have from the beginning closely and actively followed-up the events and developments linked to this project, including their participation in the 1st EISfOM seminar in Berlin in April 2004 : EUROSTAT as responsible for harmonising data at the European scale and as a coordinator of the European Statistical System; DG AGRI as responsible for Council Regulation (EEC) No 2092/91 on organic farming.

The present two-day seminar represents an important milestone in the completion of the different work-packages entrusted to the EISfOM project. Apart from giving participants the opportunity to exchange views on the proposals put forward by the project, the outcome of the open debate we start today will certainly be decisive for the EISfOM research partners as well. The conclusions from this seminar will indeed help the research partners to cross-check and fine-tune their final recommendations. The latter are expected to be delivered in the beginning of 2006.

The paramount importance of ‘good’ statistical data on the organic farming sector is obvious; in particular, if we consider the importance of the organic sector itself. We have to bear in mind the dual societal role of organic farming. On the one hand, this production system is governed by market rules, as consumers, willing to buy organic products, very often, have to pay a higher price. On the other hand, the organic farming method delivers public goods, including environmental benefits and animal welfare. From this perspective, the European Commission wishes the further development of organic farming.

I would like to emphasize that the interest of the Community in this sector is not new. The European Union, as you know, was one of the first to set up a policy for this sector. By adopting Council Regulation (EEC) No 2092/91, the Council created a solid and comprehensive Community framework defining the requirements for agricultural products and foodstuffs bearing the label ‘organic’. In order to take stock of the technical development, the Council subsequently amended this Regulation at several occasions.

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Bearing in mind the importance attached to this sector, but also the need to respond to the rapid increase in the number of farmers producing organically and to a strong demand from consumers during recent years, the Council asked the Commission four years ago, in 2001, to draw up a “European Action Plan for organic food and farming” (EAP). The aim of the EAP was to identify the requirements in order to ensure the further development of the organic sector.

Based on the outcome of an extensive consultation with Member States and stakeholders, the Commission adopted the Communication to the Council and to the European Parliament on the EAP in June 2004. The EAP put forward a list of 21 key policy measures to be implemented, such as improving information about organic farming, streamlining public support via rural development, improving production standards or strengthening research.

Action n° 3 identifies the need to improve the collection of statistical data on both production and market of organic products. Actually, the EAP acknowledges that the current data set on organic farming is neither complete nor available for all current EU countries. Moreover, the EAP realises that there is a lack of readily available statistical information about organic markets despite this being a crucial issue for the proper functioning of the supply chain.

The EAP also highlights the importance for policymakers and industry of access to statistical data about the total market share of organic products. In this regard, the aim of the EISfOM project fits perfectly well with this identified need.

The Council adopted its conclusions on the EAP in October 2004. In these conclusions, the Council attached particular importance to several lines of action, which should be appropriately reflected in the timing of their implementation. Amongst others, the Council highlighted the need to improve the collection and analysis of relevant data on the whole chain of organic production, processing, distribution and trade, and of other information relevant to the competitiveness of the sector. Regarding the implementation of these priority actions, the Council called upon the Commission and the Member States to reinforce the means for the collection and analysis of data, while avoiding unjustified costs and administrative burdens for economic operators and public authorities.

In this context, once again, the important role to be played by the EISfOM project has to be stressed.

Ladies and gentlemen,

The Council invited the Commission to advance implementation of the EAP on the basis of concrete measures with the view to assure simplification and overall coherence and to bring forward proposals in this regard in the course of 2005.

Encouraged by the request of the Council, the Commission services have been working on the implementation of the EAP since its adoption. To accomplish this work, they have taken on board the conclusions and opinions expressed by other Community Institutions. Several of the key actions identified in the EAP impose a further evolution of the legal framework in order to adapt it to the current status of, and policy framework for the organic farming sector. In fact, the EAP undertakes to make the Regulation more transparent by defining basic principles of organic farming in order to render its public services explicit.

Acknowledging, as I mentioned before, the important role played by Council Regulation (EEC) No 2092/91 for more than fourteen years, the draft proposal for a new Council Regulation builds upon the existing legal framework. This proposal will bring together objectives, principles and basic labelling, control, import and production rules in a simpler, clearer and more transparent way, thus responding to the key ideas outlined in EAP. The proposal also takes stock of the most updated recommendations of

ongoing research projects, including the EISfOM project. In this regard, the Commission services are considering options for implementing Action 3 within the organic farming regulation.

The announced draft proposal for a new organic farming regulation, planned to be adopted by the Commission by the end of this year, represents an important initiative in the Community legal framework. The second seminar of the EISfOM project that we open now and the expected recommendations fit perfectly well in this scenario.

I would like to wish you a very fruitful discussion during these two days!

Thank you for your attention.

Plenary Seesion

Chair: Markus Rippin¹

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European Action Plan for Organic Food and Farming - DG Agriculture Initiatives under Action Point 3

Eric Willems¹

Introduction

I'm pleased to be with you as the EISFOM project is particularly interesting for my work in the unit dealing with quantitative analysis and forecasts. I am not a member of the unit directly in charge of organic farming, but I have been following and processing organic statistics for several years.

In my presentation my aim is to remind you of the main regulations, the important dates of the European Plan for Organic Food and Farming, the specific references to statistics in the action plan, as well as DG Agri initiatives in the field of organic statistics and organic statistics and information are available in our directorate general.

Concerning the collaboration with EUROSTAT, my EUROSTAT colleague, Lourdes Abando will certainly speak about this.

Regulations

The main relevant regulations are

- Regulation (EEC) No 2092/91 “on organic production of agricultural products”
- Regulation (EEC) No 1804/99 “to include livestock”
- Link to Regulation (EEC) No 2078/92 (now Regulation (EC) No 1257/99)

I will not go into the details, you are certainly well aware of these regulations and Nikiforos Sivenas has spoken about them. Regulation 2092 from 1991 is the basic regulation defining organic farming, and in 1999, the basic Regulation was extended to cover animal production.

The Rural Development regulation is mentioned to remind you that payments under the agri-environmental measures can also support the delivery of environmental benefits linked to the organic farming methods. We will see later that a lot of organic holdings use this possibility

European Action Plan for Organic Food and Farming

Coming now more specifically to the European Action Plan for Organic Food and Farming, I would like to remind you of the most important dates. The exercise started in December 2002 and a Communication to the Council and the EP has been issued in June 2004.

- December 2002: Analysis of the possibility of a EAP for organic food and farming
- February 2003: Internet consultation
- June 2003: European Parliament

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- January 2004: Public hearing
- June 2004: Communication of the Commission to the Council and the European Parliament
- Published as COM(2004)415 final

The Communication from June 2004 listed 21 actions or key policy measures to be implemented. I'll not list them here, but I will focus on action 3 to 'improve the collection of statistical data on both production and market of organic products'.

Organic Food and Farming DG AGRI - Initiatives

What are DG AGRI initiatives since the June 2004 Communication on action 3?

First during the September 2004 Conference in Brussels 'European Agricultural Statistics', DG AGRI in two speeches presented the reflections about the future needs of agricultural statistics and organic statistics were clearly identified as a priority. This has been restated at several Standing Committees for Agricultural Statistics which took place in 2004 & 2005. The members of this Committee are the directors of the agricultural department of the national statistical institutes.

Likewise, during the 2004 & 2005 meetings of the EUROSTAT working groups on food safety and crop statistics, DG AGRI always insisted on the importance to collect organic data. These working groups discuss more the technical matters and implications of the decisions taken by the Standing Committee for Agricultural Statistics.

The following types of organic information and data available in DG AGRI:

- The compulsory information that the Member States have to transmit each year to DG AGRI (= article 15 of **Reg. 2092/91**), including
 - The list of operators (producers, importers as well as processors) = FORM A.
 - The list of inspection/certification bodies = FORM B
 - A supervision report explaining how the controls take place in each MS = FORM C
- DG AGRI also asks for other statistics under an informal agreement. This means that Member States are not obliged to transmit them. = Forms D to G that are listed here.
 - Number of operators per category (producers, importers, processors) = FORM D
 - Crops (area + production) = FORM E
 - Numbers of livestock = FORM F
 - Numbers of processors = FORM G

A general comment about this data transmission is that for 2003, the data are quite complete for most Member States with the exception of Form G. For the moment, 2004 is less complete but we hope that member states will send the data in the near future.

The Organic Farming Information System (OFIS) is an electronic tool for data transmission. When Member States submit the electronic forms, they are transmitted to EUROSTAT as well as to DG AGRI. OFIS was set up in 2003 but not all MS use it for the moment. Only the Czech Republic, Denmark, Germany, Greece, Finland, Luxembourg, the Netherlands, the United Kingdom and Norway have made use of it.

There is another source of organic data available in DG AGRI, the Farm Accountancy Data Network (FADN) database. Starting from the accounting year 2000/01 a new classification variable has been introduced: 1) non organic, 2) purely organic and 3) converting to organic or mixed. This implies the possibility to make use of the FADN database to analyse economic results of organic farms by country and/or compare them with conventional farms.

Rural Development Data

As mentioned above, we also receive data in the frame of the monitoring of rural development plans. For EU-15, agri-environment programmes covered more than 36 Mha in 2003 (last complete data set available). Of this total supported land area, the share of organic or in-conversion land area reached seven percent in 2003. However, Figure 1 shows that for some Member States, this share was very high: Sweden (67 percent), Denmark (37 percent), the Netherlands (26 percent), Italy (22 percent) and the United Kingdom (20 percent). Two other figures are worth pointing out: in 2003, agri-environment programmes supported nearly half of all organic land area in EU-15 and the number of organic and in-conversion holdings supported by agri-environment programmes represented about 64 percent of total organic holdings.

Organic land supported by agri-environmental programmes, as % of total supported land in EU-15, 2003 (%)

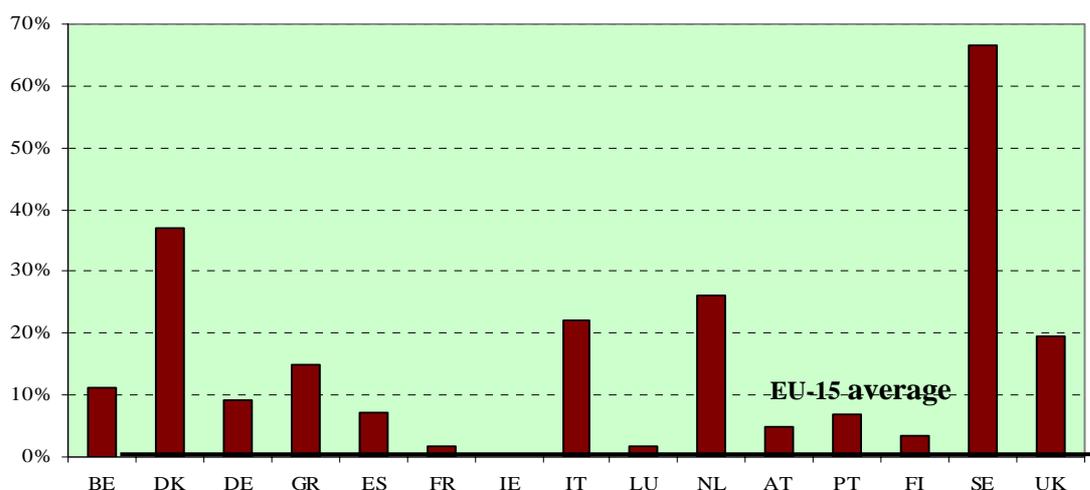


Figure 1: Organic land supported by agri-environmental programmes, as % of total supported in EU-15, 2003

Links to EUROSTAT

Agricultural statistics are in general not a priority and our DG always has to fight to avoid putting agricultural statistics as a negative priority. So far, I think we succeeded in that. There is good collaboration and good cooperation with EUROSTAT's unit dealing with organic statistics, although this is not in Eurostat's agricultural directorate. Lourdes Abando will tell you more about that.

The 2000 & 2003 farm structure surveys questionnaires comprised some questions related to organic and that will also be the case for the 2005 & 2007 surveys. We are thinking about new questions or reformulating some of them for the surveys from 2010 onwards. Your input is welcome.

In recent years, EUROSTAT improved the use of the to DG AGRI transmitted organic data; a special database on 'organic data' is now available on the EUROSTAT 'New Cronos' website.

Conclusions

The situation on organic data available at the Commission has improved a lot in the last five years and is much better than when I wrote the first version of my note "Organic Farming in the European Union: Facts and Figures" However, we still need more data to assess in detail the organic sector and, as I say several times in meetings with Member States on agricultural statistics, it is not because with the new CAP we have less intervention on the markets that we need less data to manage them. It is even the contrary because in the past DG AGRI received a lot of data directly for market management and today this is not anymore the case.

Finally, I can tell you that DG AGRI is waiting with a lot of interest the outcome of the EISFOM project and input about possible questions for the Farm Structure Survey would also be welcome.

Eurostat Initiatives on Organic Food and Farming Statistics

Lourdes Llorens Abando¹

Background

The need of statistics on organic farming products is relatively new. The development of statistics on any new domain requires clear delimitation of the field and the existence of distinctive definitions to be able to build a solid framework where the data are comparable at the EU level and over time.

The **Council Regulation (EEC) No 2092/91 of 24 June 1991** on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs is the legal framework where the term organic farming is defined and where the conditions that should be met for a product to be named organic are established. The successive amendments of this Regulation allowed the updating of the methods or products utilised in this production method but they did not vary substantially the main aspects of the above-mentioned Regulation.

The Regulation 2092/91 defines the following terms:

- Organic: from the above Regulation the term 'organic certified' has the same meaning at the EU level
- Operators: producers, processors and importers
- Organic fully converted area
- Organic under conversion area
- Organic livestock. (there is as well a difference between fully and under conversion)

The incorporation to the Community Agricultural Policy (CAP) of the second pillar related to Rural Development reinforced further the importance of the environmental aspects of the agriculture together with the development of organic farming production methods. These developments underlined the needs for statistical data for policy evaluation.

During the first years of the implementation of the Regulation, reports submitted by the Member States to the Commission were very different in content and form. This made it difficult for the Commission to have an overall view of the implementation. Moreover, several Member States asked at that time for guidance on what they are expected to provide in their report.

For the above reason DG AGRI (former DG VI) in collaboration with Eurostat, drew up a series of standardised forms designed to provide the Commission with the minimum information necessary to properly assess the implementation of the Regulation and its impact on the Agricultural sector.

The data collected in this way consists of the following items:

- Number of operators: distinguishing among producers, processors, and importers (Form D)
- Number Has. fully converted and under conversion by type of crop. (Form E)
- Crop production (Form E)
- Livestock by type (Form F)

¹ Lourdes Llorens Abando, Eurostat, BECH Building 5, rue de Alphonse Weicker, L-2920 Luxembourg

- Livestock products (Form F)
- Processors and importers by type of activity (Form G)

Eurostat verifies and builds a database using the above data collected by DG AGRI, and it is now publicly available in the on-line database at the Eurostat website.

Current situation

The inclusion of organic farming statistics in the framework of food safety statistics was agreed by the concerned Working Group at its meeting of April 2003. Since then, the aim of this team has been twofold: trying to enhance the database and documenting the existing data to integrate them within the general framework of the other statistics.

The questionnaire utilised to collect the data was mainly created to meet the requirements of the environmental policies monitoring and it did not consider some issues crucial to integrate the statistics on organic farming in the general statistical framework. Besides, the fact that the organic farming was integrated within the Food Safety statistics framework widened considerably the scope of those statistics, since the Commission approach is 'from farm to fork' and, it is in this context, where the statistics on organic farming should be developed.

Eurostat is carrying out the work within the following two lines:

- Identification of the variables collected. In this respect some attention has been drawn to the actual definitions of operator and area. The main aim is to bring in line the definition of operator with the agricultural holding as established in the Farm Structural Surveys or in line with the Business Statistics Surveys according to their being producers, processors or importers. Other goal is to identify correctly the area measured, that is, to find out whether area, either fully or under conversion, refers to the Utilised Agricultural Area as defined in the Farm Structural Survey or the total crop area, which would include main crop areas and secondary and successive crops.
- Clarification of the item classifications used. As above-mentioned the questionnaire was focused on the environmental policies monitoring and, therefore, underlined the environmental aspects. The classification of crop items is, therefore, affected by this approach and is intended to follow the land use line of the Farm Structural Survey. This classification poses many difficulties to follow the food chain steps: area, production, trade and consumption. The same considerations can be said for livestock classifications.

It is worth mentioning the publication of a Statistical in Focus on organic farming. This publication has proved, on one hand, the improvements of the data and on the other it has shown some disadjustments in the data collection.

Further developments

Eurostat plays the role of harmonising and collecting data at the European scale and it acts as the coordinator of the European Statistical System. It aims to collect quality data and sustainable over time. Therefore it should be a differentiation between what is needed in regular basis from what is needed for a specific analysis. Eurostat can build a reference framework and can design specific norms of harmonisation and questionnaires for specific studies but neither Eurostat nor ESS can attend all specific requirements.

Keeping this in mind, the further developments can be structured in three steps according to their progress in time. In the short term, the change of the legal texts pushes a change in the data collection system. **The Council Regulation No 392/2004 of 24 of February 2004** has amended some of the controls to be carried out to ensure the production methods of organic goods. In the amendment of the Regulation the controls are widened to take into consideration the storage and the marketing of organic products, and, therefore the standard forms should be modified accordingly.

The data collected up to now bear many gaps especially in the more detailed aspects. Eurostat thinks that now is the right time to propose a change of the item classification to put in line of the crop item production classification and the livestock classification utilised in the conventional agriculture statistics. The questionnaire will be then revised and discussed with the Member States.

Eurostat is collecting and building a database on statistical or potentially statistical data sources on organic farming. This would allow the collection of the main data sources that could be defined as 'official' and the identification of potential sources that could be used to enhance our database. In order to consider a source as potential data source it must fulfil some conditions. First, it must be a sufficient number of countries with the available data and it should be duly documented. Eurostat aims to work in collaboration with the National Statistical Institutes and other recognised statistical bodies.

Finally, Eurostat is analysing the possibility of using other sources that come from the administrative records but could be processed to be converted into statistical data. This would include the data used by the Commission to conduct their control activities.

In the medium term, there are two main subjects that must be carried on. The first one is the adaptation of the questionnaire to the changes on the NACE¹ and CPA² nomenclature. This is going to take place in 2008 to collect the data of 2007. This will generate a break in the series without big effects since the amount of data is still very small.

The second is the use of grants to develop new techniques or the use of existing ones to collect data on organic products along all the food chain.

Finally, in the long term the grants already conceded to MS to research into new ways to collect reliable data on organic products are going to be taken as examples to suggest new developments to MS. There are several initiatives in line and it is likely that some more will be promoted in the near future. The results of all these efforts will be seen in the future.

In summary the main points supporting the Eurostat strategy are:

1) Building a database consistent and integrated with the conventional statistics. This will include three main tasks:

- Work in the classification systems used in the domain to reach consistency with the existing classifications international accepted
- Clarify the definitions of the collected variables. The definitions should be in line with the ones used in the conventional agriculture statistics and others related with the related products statistics such as the NACE classification, PRODCOM³, Combined Nomenclature⁴ and classifications used in the food consumption area.

¹ NACE: Statistical Classification of Economic Activities in the European Community

² CPA: Statistical Classification of Products by Activity in the European Economic Community

³ PRODCOM: List of PROducts of the European COMMunity, used to collect statistics on industrial production

⁴ Combined Nomenclature: classification used to collect statistics on the external trade of goods

- Supervise the data arriving to the Commission services, their timeliness and quality.

This task is the normal work carried out by Eurostat and it must be done in the short, medium and long term.

2) Using the available data as much as possible, as in other areas partly covered within the food safety framework. MS stated their concern about the increasing costs coming from the data collection. The recommendation was then to use as much as possible the existing sources. Therefore, the data will come as much as possible from administrative registers. This is already in place since Eurostat has built the database using data coming from the certification bodies, data that is collected by DG AGRI. Other ways to gather data are being examined. In general, the launching of new surveys is not contemplated but the use of existing ones, either by adding some information or modifying slightly the data collected without harming their quality. Pooling together different statistical sources is one way to assess the quality of them and trying to correct not only their intrinsic problems but the harmonisation among them. The ESS plays a fundamental role in this task.

3) Building the database taking into account the food safety approach adopted by the Commission, that is, 'from farm to fork' approach. This means that the data are or will be collected taking into account all the steps of the production chain that are relevant in the food safety statistics framework.

4) Prioritising the collection of variables important to users, which in turn, implies, taking into account their main demands.

- Organic primary production and surface is a priority for the Environmental policy.
- Consumption is a priority for food safety, market management and environmental policies.
- Trade, imports and exports, is useful for market management policy.
- Prices are economic indicators useful to assess the impact of policy. Those are not directly included in our domain.
- Combination of statistical data sources in order to generate variables that could be served of proxies of other required variables.

This would mean that the effort will be put in the main variables but Eurostat will follow a pragmatic approach collecting the data whenever there is a good opportunity to do it.

European Case Studies on Information Systems for Organic Markets – Results and Recommendations

Norbert Gleirscher¹

Problems / Aims

The current situation of market information systems on organic farming in Europe shows a substantial lack of information. Previous EU-funded research projects such as OFCAP (FAIR3-CT96-1794) and OMIaRD (QLK5-2000-01124) have shown that although regional or national data gathering takes place in many countries, at both the national and the European level, the availability of detailed and up-to-date data is not satisfactory e.g for production, consumption, prices and trade. The main problem areas identified with regard to market information systems for organic farming can be summarised as (i) the lack of market information at the national level and (ii) where data are available, the lack of data harmonisation at the European level.

This paper focuses on the evaluation of pilot case studies in eight European countries, outlining proposals for new and/or enlarged data collection and processing systems for organic markets in Europe.

Methodology

The purpose of conducting pilot applications was to test new and/or enlarged data collection and processing systems (DCPS) for organic markets on various levels and in various countries to identify improved means of generating reliable data and overcoming barriers to the implementation of such improvements. To ensure the quality and significance of case study results, pilot applications were conducted in eight European countries (AT, DE, DK, CH, IT, NL, PL, UK) with strong involvement from national key players, such as inspection bodies, statistical offices, consumer behaviour institutions, and international organisations such as Eurostat. Within the case studies the main data levels - production, consumer, retailer, trade, prices and supply chain - were tackled and analysed. Complementary results from current and recent Framework 5 programmes (OMIaRD, EU-CEE-OFP) were integrated into the analysis.

The case study results were divided into several sections for analysis. Firstly, the Data Collection and Processing System (DCPS) was described according to the data level, practical implementation and data quality. Then the DCPS was analysed with regard to the problems and barriers identified by actor level. Finally, the findings were used to formulate specific recommendations for the development and improvement of data collection and processing systems for organic markets.

Results

According to Gleirscher et al. (2005), the main findings of the analysis of the European case studies can be summarised as follows:

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1 Farm level (statistics on organic production):

The results of national and international production level case studies show various critical points in the implementation of a harmonised DCPS. One major factor which would contribute to a substantial improvement in the availability and quality of data at the production level would be the closer involvement of certification bodies in the data collection process. Although in general this approach seems to be quite promising, the pilot applications indicate some specific barriers to its implementation. In some countries it appears that certification bodies fear that an increase in the volume of data would entail an additional workload and higher costs without adequate compensation. In some countries the establishment of a legal obligation for certification bodies to deliver statistical information was resisted, mainly because of uncertainty about which data should be delivered and how the additional costs (especially software and hardware costs) of data collection would be funded. The case studies propose individual solutions for funding and data volume, which represent constraints for international harmonisation of DCPS on the production level. In the absence of a legal requirement for certification bodies to deliver data (as in the Netherlands), the main problem is how to motivate certification bodies to do so.

One major problem area is the absence of a standardised nomenclature for correct product identification, which is reflected in various national interpretations and definitions (in the administrative data provided under 2091/92 as well as the Farm Structure Survey) of organic and conventional. These discrepancies explain in part the substantial differences between administrative data and FSS data in some countries. Hand in hand with the discussion about the introduction of a new or improved nomenclature, the modification of established national DCPS is viewed with some doubt by some of the institutions involved (statistical offices, administrative offices, certification bodies). Although from a technical viewpoint specialised IT solutions could prove quite successful (with some problems regarding the on-line registration of data and data storage), the question of who will cover the additional costs was raised several times. Other points identified related to data confidentiality (data access rights) and publication issues.

Although on the European level production level data are already provided annually under 2091/92 and every two years by the Farm Structure Survey, countries are not consistent in how they report this data, particularly where aggregated data are published, and therefore data are not always comparable. The problem with the FSS data is the methodological difficulty of proper extension to the data universe, given the small amount of representative data on organic holdings among the units sampled in each individual region. Further, it is still not possible to identify whether the whole farm or parts of the farm are managed organically.

Recommendations

One of the issues most often raised in connection with improving the availability and quality of data at the farm level was the need for a compulsory requirement for certification bodies to supply specified administrative (2092/91) data using a common definition of variables. Since in some countries it has proved difficult to improve data availability simply by legislation, it is recommended that a combination of a compulsory (legal) requirement and financial compensation for data delivery for inspection/certification bodies should be introduced. To ensure the involvement of certification bodies, a system of incentives and/or legal requirements must be in force. Changes in existing DCPS as a result of new or increased data requirements must be adequately funded.

IT solutions to facilitate data collection and processing should be developed, especially the use of on-line forms for data collection. Although this means some initial investment (which for small certification bodies could be a real financial burden) data could be captured electronically and their use for statistical

purposes made much easier. In the long term this type of investment will reduce the administrative burden and could provide the incentive for certification bodies to develop a sophisticated IT framework for easier data collection. Discussions with certifiers to explore the potential for IT solutions have already taken place in several countries and it seems to be necessary to focus on this in future discussions with certification bodies.

In order to support certification bodies in data collection and to improve data quality, the development of common guidelines for completing Eurostat/DG Agri 2092/91 returns is recommended. The absence of such guidelines at present is seen a significant factor contributing to poor returns and poor data quality in some countries. The guidelines should be developed using a participatory approach to ensure that they are clear and appropriate for the organisations involved. They should define which data are required as well as the minimum requirements in terms of data collection and the use of Eurostat nomenclatures that the certification bodies are expected to meet.

It is also recommended that the Farm Structure Survey should be harmonised with the administrative (2092/91) data collection and reporting as means of obtaining more accurate data, particularly at the production level. On the European level it seems to be worthwhile pursuing the idea of harmonising/integrating FSS and 2092/91 data, in particular to avoid having to ask producers to give similar data twice using different nomenclatures and to ensure that the FSS data is as accurate and representative as possible. A further benefit would be to obtain standardised regional data (at NUTS 2/3 level) rather than the current NUTS 0 reporting of 2092/91 data to the Commission.

To facilitate European harmonisation of various data sources on the production level mechanisms should be established which facilitate communication between statistical agencies, external experts and stakeholders and their involvement in data collection and processing. In this respect, the establishment of special working groups (integrating the main national and international key actors) would facilitate the identification of needs and the exchange of information between various stakeholders.

2 Farm level (statistics on the income of organic farms)

Although at present the Farm Accountancy Data Network (FADN) is one of the key instruments for evaluating the income of agricultural holdings, it has some major limitations particularly for the analysis of organic farms. As well as problems with the correct identification of organic farms in FADN, the current weighting and representativity of organic farms could be greatly improved. It also emerged that some statistical offices are not in favour of collecting data specifically on organic farming via FADN because FADN is seen an instrument for surveying all agricultural holdings, whether organic or not.

Recommendations

It is recommended that organic samples in existing surveys should be both correctly identified and representative. This could be achieved by moving from the current system of identifying only a limited number of wholly organic enterprises on mixed holdings to identifying all organic enterprises with a 2-digit supplementary code, which could also be used to identify conversion status. If the proposal for a 2-digit organic status identifier for all production enterprises were adopted, this could then be extended.

It was also recommended that a separate stratum for organic farms should be added to the FADN survey. Although this would considerably improve data availability and quality, some resistance from various statistical offices is expected.

On the European level it is necessary to start further discussions on this topic. Taking into account current research (e.g. the PACOLI project) as well as integrating key actors on the national and international level, the establishment of special working groups under the leadership of DG Agri and/or

Eurostat would offer possibilities for further progress. Furthermore, sufficient financial resources for surveying organic farms through the FADN must be secured.

3 Retailer/consumer level

The collection and processing of data on organic consumption and retail activities is mainly carried out by commercial market research companies (such as GfK, ACNielsen) with the effect that the establishment of a harmonised DCPS on the European level is still in its infancy. The involvement of private research companies means that the identification of organic products on the national level shows some substantial differences, especially for products without EAN codes (such as vegetables, fresh meat or cheese). It was also observed that the different market research institutes involved use different product group definitions, which inevitably causes problems in the comparison of data.

On the European level the different product definitions and nomenclatures used by market research companies cause a number of problems in the comparability of the consumer/retailer data.

Recommendations

The establishment of common protocols for data processing and exchange to ensure harmonised quality management and improved timeliness is seen as a crucial element for an improved DCPS. In this context, future efforts must focus on the development of common nomenclatures for correct organic product identification as well as for product group classification. It is also clear that the development of IT solutions should be encouraged by the establishment of an expert information/decision-making support system to facilitate the correct identification of consumer panel data.

It is also necessary to improve communication between the various actors involved in data collection and processing (e.g. statistical agencies and market research institutes). It is recommended that national user groups involving key stakeholders should be established for the development of new initiatives and improved data quality.

As private market research companies are already playing a major role in gathering data on the consumer/retailer level, it is suggested that data should be obtained directly from commercial providers working to a common European standard defined by Eurostat. One suggestion is that national authorities (e.g. statistical agencies) should cooperate with national market research institutes to provide consumer/retailer data to Eurostat. It is also possible that an international market research company, such as GfK, could be directly contracted by Eurostat to collect and compile data within the various member states.

With the heavy involvement of commercial market research institutes in data collection and processing, especially on the retailer/consumer level, the costs to data users must still remain affordable. It is therefore proposed that cooperative funding from public (e.g. EU, national governments, Eurostat) and other stakeholders could provide data for sale to organic producers/traders at reasonable prices. On the European level, the provision of sufficient resources for the successful implementation of an improved DCPS is very important.

Since data from household budget or food expenditure surveys are provided about two years after they are collected, the integration of organic food consumption issues was viewed as being of little relevance.

4 Trade level

On the trade level (including import and export) it has proved difficult to find adequate pilot applications since there were few examples to investigate. One of the main drawbacks in collecting data on organic

trade is the lack of common protocols for data collection, processing and exchange. The main constraints identified are the failure to distinguish organic and conventional products within the NACE classification and the willingness of the institutions involved to make changes to existing systems, mainly because of the increased workload (for trading enterprises and statistical agencies) and the associated costs.

Recommendations

As the development of a DCPS for trade in organic products is just beginning, the requirements for including internal trade in Europe and exports to third countries should be a subject for significant international discussion. It was also proposed that data quality should be enhanced and the response burden reduced through consulting stakeholders on the possibilities for marking organic products in their accounting systems, the development of the questionnaires and the use of electronic tools.

Extending existing DCPS on intra- and extra-European trade to distinguish between organic and conventional (e.g. NACE, CN nomenclatures) is not generally well supported. Therefore our proposal to obtain better data quality is to record organic and conventional products separately within the accounting systems of the relatively few enterprises involved in foreign trade in organic products.

If data from third country import approvals and certification body data could be integrated, this could also provide a reasonable solution, although in practice the amounts of organic products imported from third countries are negligible when compared with intra-European trade. Additionally, this solution would require some improvements in the IT systems of certification bodies.

5 Price level

Both pilot applications (IT, DE) on the price level demonstrate successful approaches to improving the availability and quality of organic price data. However, some critical points identified are the lack of (internationally) harmonised product nomenclatures as well as insufficient financial resources to maintain the initiatives.

There are still some difficulties in obtaining price data, especially at the farm level, because farmers who sell directly to cooperatives and farmers' associations are often unable to specify the product price.

Recommendations

The partners were keen to develop common protocols for data collection and processing at the price level. In the German case, it was recommended that the classification list of the German price collecting system could serve as a basis for defining a reference system for producer, wholesaler, retailer and consumer prices.

To facilitate the process, it is recommended that communication between and involvement of statistical agencies, external experts and key stakeholders should be encouraged. Established national projects such as Biomonitor, Prezzibio and ZMP could be the focus for further discussions and improvements on the European level. The funding of such projects must be guaranteed for a longer period of time to ensure better timeliness for organic price data.

6 Supply chain level

In the absence of any European DCPS supply chains, the findings of the pilot applications have to be seen as examples of best practice rather than as general recommendations for the implementation of a harmonised DCPS on the European level. The main problem identified is the lack of a DCPS at the supply chain level. Data is not comparable, mainly because of the different nomenclatures used, although from a

technical perspective the development of such systems has progressed. The systems investigated have been developed for certain specific tasks, e.g. to increase product transparency or reduce the administrative burden of inspection and certification, and not for statistical purposes. Additionally there remains the question of access rights and data confidentiality.

Recommendations

As the establishment of a European DCPS on the supply chain level will necessarily involve key stakeholders (certification bodies, statistical agencies, national and international authorities) and market actors, a system of incentives and/or legal requirements to ensure participation should be established. The involvement of certification bodies is critical.

Both case studies support the proposal that a common definition of organic farming in Europe must be agreed, which will lead to a common definition of nomenclatures and standards. Differing national interpretations of the term 'organic' according to Council Regulation (EEC) No 2092/91 still adversely affects the development of a European level DCPS integrating different data sources such as FSS, FADN, certification and administrative data.

It is also recommended that IT solutions should be developed, especially in the use of on-line forms for data collection.

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Towards a Framework for European Organic Market Information - the EISfOM Vision and Summary of Recommendations

Nicolas Lampkin¹ and Markus Rippin²

Organic farming still represents only a minor part of European and global agriculture, accounting for less than four percent of European agriculture and less than two percent of European food consumption. Given the relatively small scale of the sector and the budget constraints faced by most (if not all) countries and in particular their statistical agencies, is there really a case for a significant expansion in the provision of organic market data, let alone the development of a European Information System for Organic Markets? What would be the benefits? What form would EISfOM take, and how could the system be resourced and operated? This paper sets out the case for increased investment in organic market data and summarises the main recommendations which emerge from the EISfOM project and which will be discussed in more detail in the individual working groups.

The need for improved organic market data

Organic farming is still a relatively small sector in Europe, but in absolute terms it is similar in size to the total agriculture of one of the smaller European countries, with more than five million hectares and 150'000 holdings managed organically, operating in the context of a fully-fledged regulatory system defined by EC Reg. 2092/91. In economic terms, the organic sector is achieving an annual retail sales value of more than 30 billion Euros globally, with nearly half of this within Europe itself. The case for an investment in statistical data similar to that made by smaller countries for their own agricultural and food sectors would not be questioned if all the activity occurred in one place. However, because the activity takes place across a wide area and has only shown rapid growth in the last decade, the case for investment in statistical data has not yet been strongly made or highly prioritised. In fact, the EISfOM review of current practice in 32 European countries (Wolfert et al., 2004) has shown that in many countries investment in organic market data is virtually non-existent.

The organic sector has now developed to the point where the need for improvements in statistical data is becoming particularly pressing, and the consequences of failing to address this are potentially significant in financial terms. Currently in Europe:

- consumers are spending up to 15 billion Euros annually on organic food, and demand continues to grow at up to ten percent annually, higher than other food sectors,
- policy makers are investing up to 1 billion Euros annually in organic farming support payments and other rural development policies which benefit the organic sector,
- up to 200'000 production, processing, marketing, retailing, consultancy, inspection and certification businesses are engaged with the organic sector, and
- more than 500'000 people are earning a living from organic food and farming.

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Therefore the consequences of making incorrect decisions on the basis of poor information can no longer be ignored. Also, the potential for future expansion, particularly in the emerging economies of Central and Eastern Europe, must be taken into account. With organic farming accounting for ten percent of the agricultural sector in some countries, markets and production continuing to grow across Europe, and some countries setting targets as high as 20 percent, the current size of the organic sector does not reflect its full potential, nor are we close to seeing the organic sector as a stable and mature market.

Information in sufficient quantity and of appropriate quality is essential for sound decision-making. Policy-makers need information to determine the appropriate levels and nature of regulation and support measures. Consumers need information to support their purchasing decisions. Businesses need information to make appropriate investment decisions, including whether or not to enter or leave the organic sector.

The economic rationale for public sector investment in information and statistical data provision is based on issues of market failure. In an ideal market economy, all market agents would be perfectly competitive and operating in the context of perfect information, but this is rarely, if ever, the case in the real world. Policy interventions can be considered justifiable if they have the effect either of moving an industry more towards the perfectly competitive model or if they address specific cases where markets do not operate in the way posited in this model. In particular, lack of information can lead to sub-optimal decision-making and functioning of markets through information asymmetry, absence of transparency (particularly in price setting) and increased costs and investment risks.

For example, inadequate information for producers means that they are not able to assess the business case for conversion accurately, and may decide not to convert when it may, in fact, be advantageous to do so, thereby undermining public policy goals including both the provision of public goods (environment etc.) and wider consumer choice/supporting the development of nascent markets. In the latter context, an under-supplied market may result in higher prices for consumers and/or lack of access to products for which demand exists, both of which represent a loss of consumer welfare. In addition, under-supply may result in lack of critical mass or economies of scale which would be needed to make organic businesses competitive in the wider market place. Inadequate information may also result in producers converting where it is inappropriate to do so, or converting when there is little understanding of the technical and business implications, leading to costly management mistakes and possible later abandonment of organic management. To the extent that a business suffers losses which are not compensated by direct payments, it can be argued that there is a loss of producer welfare arising from the government incentives, which could be avoided with better information availability. There is also a risk that public payments will be wasted to the extent that they are not repaid when a producer gives up (e.g. through bankruptcy), or if a producer does not continue with organic management after the contractual period for public support comes to an end.

In a market economy, in principle, any information which relates to improved business performance has a value and arguably should therefore be provided on a commercial basis, and in fact a significant amount of organic market information is already provided like this. This does, of course, presuppose that the quality of the information supplied is appropriate, but this is far from the case with current organic market data. In such cases, poor quality data can be as much of a problem as no data.

There is also a distinct problem with 'user pays' information systems when a sector is expanding rapidly and new entrants need access to information without having contributed financially to the development of the information systems. Existing businesses will seek to protect their competitive position and can limit access to available information, thus creating a barrier to new entrants. This may be seen as undesirable in terms of competition policy, but is also undesirable where the expansion of a sector is seen as beneficial in terms of the provision of public goods such as environmental protection.

There is therefore a strong case to be made for the improvement of both the availability and quality of organic market information, given the size of the organic sector and its contribution to broader public policy objectives, and for achieving this through a combination of public and private sector investment.

This case has been recognised in the European Action Plan for Organic Food and Farming (EC, 2004), the support for organic farming research under the framework research programmes, and the strategic priorities set for the implementation of the 2007-2013 European rural development programme (EC, 2005). Therefore, the key issue now is to convert policy commitments into action.

The EISfOM vision

Starting from the clear need for significant improvements in the availability and quality of statistical data and market information on organic food and farming, the EISfOM project has identified a number of principles to guide future developments (Recke et al., 2004):

- data availability and quality need to be improved across a broad range of levels, covering production area, volume and financial data, prices, intermediate and final consumption data, trade and supply balance data, as well as relevant indicators for policy evaluation and business decision-making;
- these different levels should not be seen in isolation – opportunities for linking data collection activities should be exploited to avoid duplication;
- recognising the budget constraints faced by all statistical agencies, low cost solutions building on existing systems and IT solutions, including on-line access to data, should be favoured;
- the use of existing systems requires accurate identification and differentiation of organic and other enterprises/products – suitable nomenclatures and classification systems need to be developed;
- quality assurance systems need to be implemented to ensure high data quality;
- comparability of data at the European level should be encouraged through output harmonisation in the first instance, providing opportunities for national solutions to be implemented which take into account specific national circumstances;
- where no systems exist, input harmonisation strategies based on the transfer of good reference systems could be implemented;
- organic inspection/certification agencies have a central role in overseeing organic production, processing and trade, and should play a leading role in the provision of data, with encouragement from a combination of legal and financial incentives;
- stakeholders (including data users, businesses and policy-makers), data owners (businesses, inspection/certification agencies and organic producer/trade associations) and data processors (consultants, researchers) should be fully integrated in the process of developing organic market data systems, in recognition of the specific needs and expertise that they can contribute.

Farm-level production data

Both the Farm Structure Survey (FSS) and the reporting of the member states in accordance with EU regulation 2092/91, based on data from the inspection bodies, are relevant data collection and processing systems for organic production in Europe.

Due to differences in organic farming definitions, product classification and survey methods, the two different data sets produced by the FSS and by 2092/91 reporting cannot be reconciled and the FSS data are less appropriate for continuous observation of organic production. The data collected by inspection bodies therefore represent the most precise and up-to-date data available, and this system is recommended as a starting point.

Data from the inspection/certification bodies provide the most extensive and highest quality information. In order to improve the system, each country should designate a national organisation responsible for the collection of data on organic production based on inspection/certification records in accordance with EU regulation 2092/91. Since some countries are already successfully collecting data from the inspection bodies, e.g. France (Agence BIO), The Netherlands (Biologica) and Germany (ZMP), one or two of these should be defined as reference systems to act as a model for countries which are not yet collecting reliable production data.

The product classification used for 2092/91 data reporting should be improved. ZMP proposals for a system harmonised with the Eurostat classification are made in Appendix 10.1 of the D5 report and this should form the basis for further discussions.

A legal requirement for returning production level data should be introduced in the revision of regulation 2092/91 which is now taking place. This requirement should be supported by financial incentives to inspection/ certification bodies to return data (1-2 Euros per farm, or possibly 3-4 Euros per farm in some countries, would be sufficient to cover the additional cost for inspection bodies to provide these data). On this basis it is estimated that for the almost 200'000 organic farms in Europe at present, an extra 200'000-400'000 Euros annually would be needed to compensate the inspection bodies for the extra work load.

The introduction of a legal requirement for data reporting by inspection/certification bodies supported by financial incentives should also be considered in other parts of the food supply chain, including trade, processing and use of intermediate products such as animal feeds.

Farm-level financial data

Organic farm financial data has been collected for some time in the context of specific research studies, national surveys and, since 2000, as part of EU-FADN which requires all member states to identify organic holdings in the survey data they submit. The results from these studies, and the need for improvements in data collection and processing systems, have been the subject of several reviews which reach clear conclusions about the changes needed.

The main problems relate to the identification of organic holdings in national surveys and EU-FADN submissions, and the small size and representativity of the organic samples thus obtained. There are also issues relating to farm type and size classification, the need for continual updating and availability of time series data, and comparisons with conventional farm data.

It is recommended that more precise identification of organic holdings and production enterprises is needed, using a coding system capable of identifying organic and in-conversion production enterprises. Larger samples of organic holdings drawn on a representative basis are also required. To make this compatible with existing survey requirements, modifications to weighting systems in national and EU-FADN samples will be required. A methodology for selecting comparable conventional holdings is proposed.

The experiences with national surveys and specific research studies in Germany, UK, Netherlands, Austria, Switzerland and Denmark provide a basis of experience to use as reference systems. These results and approaches are covered by the reviews of results and methods that have been conducted recently.

If the changes proposed are incorporated in existing national survey systems, the main costs will relate to the adaptation of those systems and the inclusion of additional holdings in the surveys. This is likely to be less expensive than relying on special research projects which tend to be time limited and become outdated. The costs of modifications to systems may be reduced if they are implemented at the same time as other changes to FADN resulting from the CAP reform.

At the European level, there is a need for EU-FADN to review and implement changes relating to the identification of organic holdings, the use of Standard Gross Margins as a basis for the classification of organic farms, and the basis for selection of comparable organic and conventional farms from the database. There is also a need to recognise the possibility of over-reporting of organic farms by member states and to adjust for this with appropriate weightings rather than excluding organic farms from the EU-FADN database. These issues need to be made a policy priority for EU-FADN, with the aim of deciding procedures in 2006 and implementing them (given the need for legislative amendments) from 2008 or 2009.

Prices

A price collection system for farmer and trade prices, including all important local products, was established by ZMP in Germany in 1992 and provides useful data for farmers, wholesalers, retailers, processors and consumers. In Italy, the collection of fruit and vegetable prices at farmer and wholesale level has been established. Most problems arise because of the need to gather prices from all over the country for the different marketing levels from a considerable number of data providers in order to calculate realistic averages. Adequate remuneration of data providers (including information and advice) provides the motivation for continuous delivery of data and is crucial to success.

It is recommended that the nomenclature and classification system of product groups, products and varieties used by ZMP Germany should be used in a harmonised European classification system as presented in Annex 10.2, which shows the recommended level of aggregation and detail. On-going discussion on harmonisation of the systems established by ZMP in Germany and Prezzibio in Italy means that they can be used as reference systems for other countries seeking to establish new systems. Experience of the ZMP system suggests that the establishment and continuous running of a price data collection system would require 12 person months annually for each main product group.

As there is currently no standardised classification system and nomenclature for price data (farmer-, processor-, trader-, consumer-level) at the European level, it is recommended that a classification system based on the ZMP proposal should be developed in collaboration with Eurostat as a means of output harmonisation for all European countries.

Consumer/retailer level

Consumer and/or retailer panels on organic food data are already established in many countries in Europe (AT, CH, DE, DK, ES, IT, NL, UK, etc.). Also, individual European researchers collect data concerning sales of organic food as part of funded projects or private initiatives. However, there are many inconsistencies in the data collection methods used and this limits their suitability for international comparisons.

In response to an inquiry from Eurostat, several services of the EU Commission have expressed their needs for data on food intake and the volume of (organic) food consumption. Using information from consumer and/or retailer panels it would be possible to deliver more reliable estimates of the volume of (organic) food purchases and estimated figures for food consumption. To meet these needs, Eurostat has invited the official national statistical agencies to initiate investigation of the collection of consumption data, but so far there has been very little contact between these institutions and private market research companies with specialist knowledge of the organic sector or with the EISfOM project. Establishing contacts on a national basis is crucial for the success of the EISfOM consumer level initiative.

The consumer data should be adapted to the classification of food items which will be proposed by Eurostat in cooperation with the national authorities for food consumption purposes, e.g. European Food Groupings. Furthermore, the definition of organic products should match the official EU definition. A detailed description of the panel stratification as well as statistical validity of data is required.

A project proposal should be developed which integrates the EISfOM partners, current data providers and national statistical agencies, building on existing systems, to include the goals of: harmonisation of product group definition, the development of estimates for organic food consumption and food intake, and data exchange at the European level. Options for the integration of private market research data on food consumption should also be examined. A possible example for such an approach is the Spanish Ministry of Agriculture cooperation with TNS to collect food consumption data, including organic products.

Concepts for this project proposal will be developed at this seminar. It is estimated that the centralised output harmonisation of the data would require about 12 person months, with an additional one month per year for each participating country.

Supply balances and international trade

This is the least developed and most problematic level, but one which is also highly important both for policy making and for investment decision-making.

Currently, there is no organic DCPS on the **international trade** level that can be recommended, although a couple of models were examined as part of the EISfOM project. The Danish DCPS is very a special case because of the unique Danish statistical legal and reporting framework. The first steps of the UK Department for Environment Food and Rural Affairs (Defra) to record third country import data may be relevant but cannot be fully evaluated as no data have been published yet.

Data on **supply balances** are not available at either EU or national level. As a consequence there is no starting point, other than the existing supply balance statistics on conventional products, but because of special methodical problems the conventional approach has to be adapted to get a statistic fulfilling the needs of the potential users.

Because of the lack of appropriate models, it is not yet possible to make specific recommendations for the development of this data level, and there will need to be quite fundamental discussions at the Brussels seminar about how the specific problems identified below can be resolved, if at all. But it is also clear that only with reliable data resulting from the production and consumption level recommendations will it be partly possible to calculate supply balance sheets. Feedback from DG Agri has shown that there is a strong interest in having supply balances for organic products at the EU and member state levels for key commodities. The methodological problems identified have to be solved so that the quality of the data will be good enough for policy makers, market actors and stakeholders.

The institutional framework

At all the different levels reviewed, there is an urgent need to improve data quality and quantity about the organic market. Eurostat is the central European coordinating organisation which can define a common systematic and infrastructure in order to achieve comparable data, but the necessary tasks cannot be achieved by Eurostat alone. As most data needed cannot be provided by the official national contact partners of Eurostat, other public and private organisations and experts will need to be integrated into a wider network than the one which is currently operated by Eurostat. Two options have been identified to achieve this integration.

The first option would be to establish a European Advisory Group, consisting of independent experts and stakeholder representatives, to advise Eurostat and DG Agri on the steps that they can take to improve data availability and quality.

The second option would be to establish a European organic market data network or observatory in order to co-ordinate data collection efforts, support integration across the different DCPS levels, foster harmonisation processes, assist the transfer of reference systems to other European countries, monitor data provided and contribute to data dissemination. Such a network would need to formally integrate different statistical agencies as well as data owners, processors and users, and could be modelled on the national observatories that have been established in Italy, France and other countries.

DG Agri and Eurostat must decide jointly which of these two options is most appropriate, recognising that there will be a need for core funding of the central coordination and expert/stakeholder participation in this process. However, it is expected that work at the national level would continue to be funded by member states and some specific development projects might be funded through DG Research as STREP/SSP type projects.

Conclusions

The EISfOM project, with the support of Eurostat and DG Agri, has prepared the vision and the groundwork for establishing a new organic food and farming statistical system in Europe, a key action point of the European Commission's Action Plan for organic food and farming. The recommendations presented in this report will be modified and finalised by early 2006, in the light of the discussions in the Brussels seminar. It will then be for the Commission and Member States, working in partnership with stakeholders and experts outside the official statistical agencies, to determine how far this vision can be realised.

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Group 1: Production

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EISFOM Recommendations for Farm Production Data¹

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Relevant data collection and processing systems (DCPS) as starting points

Relevant data collection and processing systems on organic farming and organic production in Europe are the Farm Structure Survey (FSS) and the reporting of the Member States according to Council Regulation (EEC) No 2092/91 based on the data from inspection /certification bodies.

The Farm Structure Survey is carried out every two or three years, and a full survey is carried out every ten years. Thus, FSS data are less useful than the annual control data for continuous (annual) data on organic production structures. There are also some problems with the identification of organic production activities on mixed-status (conventional and organic) holdings, the exclusion of very small holdings, as well as the inclusion of non-certified but policy-supported organic holdings in some countries. The farm structure survey is, however a good source of supplementary information on organic farming, as it includes data not covered by the administrative data collected as part of Council Regulation (EEC) No 2092/91, such as labour use or non-farming activities. Furthermore the FSS results can and should be used for data validation and cross checking purposes with the data from inspection or certification bodies, and provides opportunities for differentiating results by region and farm type.

Council Regulation (EEC) No 2092/91 obliges Member States to report annually to the European Commission on the number of organic farms, the number of organic companies and the total organic area. As the data collected by inspection /certification bodies are the most precise and up-to-date available, this system is recommended as a starting point for future development. However, there is currently no legal obligation for member states to provide more detailed statistical data.

Therefore a major recommendation is that the European Commission should introduce a legal requirement for Member States to report the area cultivated organically and organic livestock on an annual basis.

The precise breakdown of the data should be harmonised according to the Eurostat classification system (including additional breakdown of data categories suggested by the EISfOM project⁶). Certification bodies should also record the quantities of organic produce moving between actors as part of the traceability process.

¹ We gratefully acknowledge input from experts of Eurostat in revising this paper for publication and in making additional comments which will be included in the final recommendations of the EISfOM project.

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⁶ These data categories are available from the EISfOM website at www.eisfom.org/publications/index.html

Problem areas and barriers

Currently there are two different sets of data both on the European and the national level: the farms structure survey data and the data collected as part of Council Regulation (EEC) No 2092/91. These provide different results use different definitions and methodologies. One of the weaknesses at present is that there is no common classification system between the two datasets.

Farm Structure Survey

The Farm structure survey has the following problems:

- There is the problem of identification of organic production activities on holdings which have dual organic and conventional status, as this can lead to significantly higher levels of production (crop areas/livestock numbers) apparently organic which is not.
- Problems arise because small farms (usually less than one, in some countries less than two hectares) are not taken into account in several national systems. This means that a substantial amount of organic farming activity is excluded from the survey. In Germany for instance 16 % of the organic farms are not included into the FSS as they are smaller than two hectares.
- Another major point is related to the fact that in some countries policy-supported but not certified organic holdings are included (for instance Sweden).
- The information on individual crop areas and livestock numbers collected as part of the Farm Structure Survey does not make a distinction between in-conversion and fully converted activities, although this is also a problem with some 2092/91 data sets.

Council Regulation (EEC) No 2092/91

The data reporting according to Council Regulation (EEC) 2092/91 includes the following problems. Some countries use information from the Farm Structure Survey to comply with Council Regulation (EEC) No 2092/91, while in other countries data from the certification bodies are used.

- Furthermore, it is not clear from Council Regulation (EEC) No 2092/91 which national organisation is responsible for the transmission of organic data to DG Agri, either organic farming certification bodies, the Ministry of Agriculture, the National Statistical Office, or other institutes.
- Detailed reporting is not compulsory and the degree of detail in the data varies from country to country, and data is therefore not comparable between countries.

Recommended classification systems and procedures

1. For data collection according to Council Regulation (EEC) No 2092/91, it is recommended that the national organisation responsible for the collection of data about organic production should be clearly identified.
2. Data from the inspection /certification bodies provide the most extensive and highest quality information. In order to achieve comparable data between the Member States, it is recommended that on the European level the European Commission should seek to introduce legislation, which would include the obligation to use a classification system based on the Eurostat database. Up till now it has been discussed whether this should be more administrative legislation (DG Agri) or more statistical legislation (Eurostat). Within Eurostat specific new legislation for organic statistics has a low priority and the revision of Regulation 2092/91 on organic farming seems the better option. (Currently the

German ZMP system is being harmonised with the Eurostat classification. The current version of this classification system is attached as annex 1 (provisional version).)

3. It would be useful to match inspection /certification body data with the Farm Structure Survey for data validation and cross checking purposes. For the Netherlands, data provided by the certification body Skal will be compared with the results of the Farm Structure Survey, for which Statistics Netherlands (CBS) controls the full database. In Germany, a project starting in August 2005 will as well compare data from both FSS and control bodies.
4. Production quantities: data from inspection /certification bodies could be used in some countries to estimate organic production (using area, livestock number and yield data). If these data are not available from the inspection /certification bodies additional surveys like the one conducted by the Information Centre in Finland could be an alternative. The sample size of the Finnish annual yield survey is approximately 10,000 farmers, of which about 700 are organic farmers. Using this survey it is possible to publish annual yield figures and to estimate the organic production. However, to carry out such a survey every year in all European countries would be very time-consuming and very expensive.

Another option would be to use existing surveys in combination with expert panels. In the Netherlands, some annual statistical surveys exist (like FADN) which can estimate Dutch crop production, and some of the completed questionnaires are from organic farms. By comparing the results of the organic with the conventional production, a first impression may emerge of the relative differences between them. With information about the organic land area or number of animals, a rough estimate could be made of organic production. By discussing these results with a panel of experts, best estimates for organic crop and animal production could be produced.

Recommended reference systems

1. Since some countries are already successfully collecting data from the inspection /certification bodies, such as France (Agence Bio), The Netherlands (SKAL/LEI) and Germany (ZMP), it is recommended that one or two of them should be designated as reference systems which would act as a model for other countries which are not yet collecting reliable production data.
2. As there are ongoing attempts to find common data collection and processing systems, it may be interesting to use the Polish initiative (see Gleirscher et al., 2005) as an example or as a starting point for harmonisation. However, it must first be established and checked whether this new system is running well and whether the methods could be implemented in other countries. The Agricultural and Food Quality Inspection, the supervision agency for the certification bodies in Poland, has developed a database called "Computer system for organic production, registration, inspection and certification" which will become operational in the course of 2005. Particular attention was paid to links with other data sources on organic farming, such as the Farm Structure Survey. For that reason, there are plans to develop a common identification number, which would link these databases and make them comparable. These identifiers should be in line (or at least allow a link) with the identifiers already used..

But it is of primary importance to use the same definitions and classifications for both the reporting under Council Regulation (EEC) No 2092/91 and for the Farm Structure Survey since this will provide the only means for comparison of the results for organic farming with the total agricultural sector.

Timing, cost frames and funding

1. Experience in some countries (Germany, France) shows that it is possible within a timescale of two or three years to agree with the inspection /certification bodies a common classification system to record and retrieve data from a database (even with the 16 inspection bodies in Germany). It can be estimated that €1-2 per farm (in some countries perhaps €3-4 per farm) is sufficient to cover the additional cost for inspection bodies to provide these data. Thus, for the close to 200'000 organic farms in Europe at present, €200'000-400'000 will be needed to compensate the inspection bodies for the extra workload. About two or three person months per country would be needed to check, aggregate and report on the data collected.
2. The introduction of a unique identification number for (organic) farms would make it possible to compare the data from the certification bodies with the organic data and the data on total agriculture in the Farm Structure Survey.
3. A combination of legal requirements and compensation to the certification bodies seems to be the only effective way to improve the structure of organic farming data at the European level. The Polish case shows that a legal instrument is necessary to persuade the certification bodies to forward the data. It is also clear that alongside compulsory requirements of this sort, instruments for financial compensation, which recognise the additional workload for certification bodies, should be developed in order to avoid an additional burden for organic farmers (see above).

Actions recommended at the European level

1. Define a classification system to be used by all Member States and inspection /certification bodies.
2. Introduce a legal requirement for inspection /certification bodies to provide detailed data.
3. Provide financial compensation to inspection /certification bodies.
4. Investigate the Polish system to establish how successful it is and whether it could be implemented in other countries.

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The EISfOM Proposal for Production: Ministry User Response

Nathalie Rison Alabert¹

Introduction

During the first EISfOM seminar Katell Guernic from Agence BIO presented the French observatory of organic production and processing which began in 1995. This observatory is mainly based on the annual data collection from the five national certification bodies, and was among those which inspired the EISfOM proposals.

Agence BIO was created in 2001, bringing together the French Ministry of Agriculture, the French Ministry of Environment and producers and processors organisations. Its aim is to promote and develop organic agriculture in France. The national observatory is one of the means used to do this.

The Ministry of Agriculture is the organisation responsible for the transmission of organic data to DG Agri according to EC Regulation 2092 /91, but the role of Agence BIO obtaining this data is increasing especially since Eurostat has requested more detailed information.

This paper presents a brief description of the current situation in France before considering the EISfOM proposals.

Towards a common production and processing database in France: methodology

Agence BIO has been in charge of the French observatory since 2002, and each year it publishes the national data on organic farming. This has been achieved by buying anonymous data from certification bodies and working with them to harmonise classification.

Part of this report (the national figures) is sent by the Ministry to DG Agri, but the main interest of this report is the regional data for producers, processors and importers.

Since 2003 Agence BIO has also managed the notification procedure according to EC Regulation 2092/91. In accordance with the procedure we keep a list of addresses and production details for the French operators in organic farming, plus some statistical information which enriched the 2005 publications.

Furthermore, we collect data from agricultural offices and statistical agencies to obtain a better picture for specific products (cereals, milk, meat, eggs, etc.) and we have started to conduct surveys to obtain some missing data (e.g. cereal yields and animal consumption).

From 2006 it has been agreed that control bodies will provide Agence BIO not only with statistical information but also with administrative data.

The aim is to obtain a unique national organic base that will serve various needs:

- administrative: operators and products according to article 8 of EC Regulation 2092/91,
- statistical (DG Agri): numbers, lists and areas of certified operators

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- statistical (national demand) : organic farm structures, volumes...

Results and perspectives

In December 2004 Agence BIO made the 'French directory of organic operators and products' (<http://annuaire.agencebio.org>) available on line. This directory is updated daily and can be accessed fully by national and regional public administrations in charge of agriculture and by control bodies who receive a specific access code, whilst the public is available to individuals or companies looking for organic products.

Further development in 2006 will bring this information together with national control bodies yearly organic files to get a complete set of information. The link will be provided via the unique SIRET identification number which is defined in France by decree n°97-497 of May 16, 1997 and which is used for the FSS surveys.

The statistical information should be based on the current Eurostat classification as defined by the Ministry. However, this constitutes a change for organic certification bodies which until now have worked to a specific classification which is close to Eurostat but more or less detailed according to the needs of French organisations involved in organic farming.

Comments on EISfOM proposal

The EISfOM conclusions are mostly shared by the French administrations in charge of statistics on organic production. However, there are some comments below.

a) Introduce legislation including the obligation to use a classification system based on a common database

This is one of the aims of the European Action Plan, but there must be some financial compensation for the control bodies even if statistics become mandatory: there is a real need for financing the necessary changes and investments for harmonisation and good data quality.

b) Obligation to use a common classification system based on the Eurostat database

There could be differences between Eurostat, ZMP and NACE/CPS classifications and the specific needs of national organic organisations.

c) Matching data with the National Farm Structure Surveys

Unless the EU carries out a proper census on organic farming, national Farm Structure Surveys are not sufficient as they stand to follow organic farmers on an annual basis, and the samples are too small to permit good interpretation of the data. Therefore there is a need for a specific administrative survey in the organic field.

This can only be obtained by compiling the data from organic certification bodies and other sources not directly within the scope of certification (structure, costs, trade channels...).

d) Estimate organic production using area and yield data

Until now it has not been possible in France to obtain data on quantities as certification bodies found it a very time-consuming process to record such data. This is why specific surveys are now being conducted in order to obtain these data, as is the case in other countries.

e) Using the Polish initiative as an example for harmonisation

It is necessary to know more about this initiative in order to assess how it could be useful for other countries.

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Comment on the EISfOM Proposal Farm Production: Certifyer Response

Michaela Coli¹

Problems / Aims

Council Regulation (EEC) No 2092/91 obliges Member States to report annually to the European Commission the number of organic farms, the number of organic companies and the total organic area.

Each year ICEA sends the Italian Ministry of Agriculture the following information:

- Number of organic farms
- Total number of organic operators divided into the following six different types:
 - P = Produzione agricola (crop production)
 - PT = Produzione agricola (crop production)+ unità di preparazione aziendale (processing unit)
 - T = Trasformazione (processor)
 - PZ = Produzione agricola (crop production) + allevamento zootecnico (livestock)
 - PZT = Produzione agricola (crop production) + allevamento zootecnico (livestock)+ unità di preparazione aziendale (processing unit)
 - I = Importatori da Paesi terzi (importers from Third Countries)

For each region, the total surface under control is divided into: organically farmed area, area in conversion, conventionally farmed area and total organically farmed area.

Geographical distribution of controlled operators according to type of activity

At 31 December 2004 ICEA controlled 10'204 operators in Italy.

Each region in Italy asks the certification bodies for the same kind of information for the respective area on an annual basis.

Methodology /Comments

ICEA has a computer program to manage all these data, but the implementation and the management of the updating has been and remains both expensive and laborious.

The actions recommended on the European level can provide a good solution to obtaining more accurate data and detailed reporting directly from certification bodies, who have access to these during their normal activity and, more importantly, need this information to better plan their activities.

More detailed comments on the recommendations are as follows.

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1. Define a classification system to be used by all Member States and inspection /certification bodies (Eurostat/ZMP).

This is very important because there is a need not only for a common classification system, but also for an updated version: in the Italian classification, for instance, there is no space for the definition of traders, shops, restaurants, etc, that the certification bodies normally inspect and certify.

2. Introduce a legal requirement for inspection/certification bodies to provide detailed data.

This could be acceptable for certification bodies if the tools they can use are really useful for themselves at the outset, and if all the systems of data collection are sustainable.

3. Provide financial compensation to inspection/certification bodies.

That could be a really good idea if it were applied because it is unthinkable to ask operators to pay for this kind of information (and certification bodies cannot pay for it either!) that certification bodies have to submit to the Ministry of Agriculture or some similar institution. Currently operators have a lot of difficulties in paying the 'normal' fee for inspection and certification, and we really cannot consider asking them to pay even 1 € more.

4. Investigate the Polish system to establish how successful it is and whether it could be implemented in other countries.

We do not have enough information to comment on this point, but it could be a good suggestion.

Results

As we have explained, detailed data collection and reporting should be useful for the certification bodies, and the implementation of this system should be supported not by the certification bodies or the operators themselves, but mainly by the other parties which would make use of this information.

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Administrative and Statistical Data Collection System for Organic Farming in Poland – Recommendations for Improvement

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Introduction

In Poland, as in other European Union countries, most data regarding organic farming comes from administrative sources. The Main Inspectorate of Food and Quality Inspection (IJHARS) supervises certification bodies as well as collecting and processing administrative data on organic farms. IJHARS is subordinate to the Minister of Agriculture and Rural Development (MRiRW), which in turn is responsible for reporting organic farm data in Poland to the European Commission in accordance with Council Regulation (EEC) No. 2092/91 (data from certification bodies).

Since 2005 it has been possible in Poland to obtain organic farm data from statistical sources, that is from the Farm Structure Survey (FSS). The FSS was first carried out in Poland by the Central Statistical Office (GUS) in 2005 according to the Eurostat calendar and requirements.

As an element in harmonising the system for collecting and processing data on organic farming in Poland, discussions were undertaken concerning the establishment of a common identification number that would facilitate data exchange.

Update on development of the system for recording, certification and inspection of organic farming

Within the framework of the PHARE project PL 01.04.04 organic farming, as the supervisory office in the organic control system IJHARS has attempted to set up an electronic database (a computer system for recording, certification and inspection of organic farming) covering all aspects of the control system in organic farming (Wróblewska, Szymborska, 2004).

Although the software was developed in 2004, the system for recording, certification and inspection of organic farming has not yet been implemented and modifications have continued through to the end of August 2005, associated in part with the need to establish definitions of variables and adjust to the new legislation for reporting on organic farming (Rozporządzenie..., 2005) so as to guarantee the reliability and comparability of data received from certification bodies. Even though the scope of the data to be collected after implementation of the system is very extensive and goes beyond production data, it is difficult to see that the current design of the system will be sufficient. The lack of common definitions of variables may significantly limit the use of this system, since modifications to the existing system may prove to be impossible for financial and organisational reasons.

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2 Zakowska – Biemans Sylwia, Warsaw Agriculture University, Nowoursynowska 159 C Street, PL-02-776, Warsaw, Poland, Internet www.sggw.waw.pl

Nevertheless, in 2005, computer equipment and software were provided to certification bodies. The IJHARS guidelines say that the system has to be operational in 2006. Data will be entered directly by certification bodies, after the appropriate staff training on the data input process.

The Polish Organic Farming Act of 20 April 2004 (O. J. No. 93) places a legal obligation on certification bodies to convey data to the IJHARS: if they have this data, they must forward provide it. The Chief Inspector of Food and Quality Inspection may demand 'any additional information' and data from certification bodies, including production data. This provision is useful and has been used in one instance to date to obtain additional data from a certification body. However, cooperation with existing certification bodies is crucial in order to make the system operational.

Although the computer system for recording, certification and inspection for organic farming was not yet operational, an attempt was made in 2005 to collect production data for organic farming using a particular form prepared for this purpose. It is difficult to assess the reliability of this data since the IJHARS was unable to analyse the data collection methodology of specific certification bodies. This leads to further problems concerning, for example, the status of the data supplied i.e. whether this is the status on the control date, the average status or the average annual status. Experience gained in carrying out this survey will be used to improve the existing database and the manner of data entry by the certification bodies.

Barriers to the development of a common / integrated data collection system for organic production in Poland

The significant increase in the number of organic farms and organic area over the last three years has led to increased interest in organic farming and greater demand for related data. Because of this, in 2003 the Central Statistical Office (GUS), together with The Main Inspectorate of Food and Quality Inspection (IJHARS) and Warsaw Agricultural University (SGGW) in an informal working group, discussed the possibility of building an information system for Polish organic farms and the market in organic products.

It is planned that statistical and administrative data will be shared by the IJHARS office of supervision and the Central Statistical Office whilst maintaining statistical confidentiality.

During discussions on the possibility of creating a joint system, the development of a common identification number for organic producers was proposed. This was investigated in greater detail during the case study which formed part of Workpackage 5 of the EISfOM project (Gleirscher, N., et al., 2005). Both institutions acknowledged it was important for this to be one of already existing identification numbers. GUS proposed using the PESEL (personal identification number), NIP (tax identification number), REGON (economic activity identification number) or IACS (Integrated Administration and Control System) farm registration number for this. This would guarantee that all organic producers were included. It should be remembered that private farmers in Poland are treated as individuals and not as legal entities and therefore they only possess a PESEL and NIP for personal income tax purposes. On the other hand, farms which belong to legal entities do not possess a PESEL number. IJHARS suggested the possibility of using numbers assigned to farms in IACS as the common identification number. This number is assigned by the Agency for the Restructuring and Modernisation of Agriculture (ARiMR) which is one of the two funding agencies. Since the vast majority of organic farms use various forms of support, this number could be useful but it cannot be treated as the standard. However, it is worth mentioning that the form 'Notification of starting up an activity in organic farming' already requires the identification numbers proposed by GUS and it is currently mandatory to use this form to apply for inspection. Despite this, both institutions acknowledge that the issue of identification of organic

producers is crucial and they share the view that the proposed introduction of a common identification number will be difficult for legal, technical and financial reasons.

The inability to fully identify organic producers and the rapidly changing data caused difficulties in the FSS. The FSS was supposed to include the entire set of organic farms, both certified farms and in conversion. When the survey began GUS had a list of organic farms in Poland as at 31 December 2004, and these farms were included in the survey sample. However, the FSS was conducted in June 2005 and the sample may include 'new' organic farms reported between January and June 2005 that were not included in the list provided by IJHARS. The 'organic' section included a question on whether the farm is certified. If the answer was yes and it was not on the list held when conducting the interviews, this information was checked with the assistance of the Voivodship Inspectorates of Food and Quality Inspection (WIJHARS), which are responsible for receiving reports from producers intending to operate a farm using organic methods. The question arises of whether the 'new' reporting farms actually undertook conversion to organic production. Thus, it will be necessary to verify data collected upon completion of the survey and this will be a significant difficulty.

Summary

The intensive development of organic farming in Poland is causing increased demand for data on this subject and the solutions which were employed previously require further improvement. In the Farm Structure Survey it will be possible to obtain a breakdown of certified farms and farms undergoing conversion by comparing an updated list of farms from IJHARS with the GUS farm list. A common identification number seems to be crucial to improve the exchange of administrative and statistical data. On the other hand, it is difficult to ascertain in the FSS whether an entire farm or only a certain part of it (and if so, which part) is operated organically. It may be possible to add questions concerning organic farms, if interested stakeholders indicate a demand for this kind of data. During the preparations for the 2005 FSS, GUS did not receive any such requests. Nonetheless, the form contains questions which identify various aspects of organic farming operations, such as labour use or allocation of production. Additionally, small farms (less than one ha), which are frequently omitted in other surveys, were included in Polish FSS.

In the case of administrative data, the lack of common definitions of variables and the scope of data to be gathered poses a barrier to further development of the Polish computer system for recording, certification and inspection for organic farming and this can be acknowledged as a factor slowing progress in the harmonisation of organic farming data collection and processing systems in the European Union. A legal instrument could be introduced which would require the use of particular variable definitions. This is a necessary stage in building a common system of market information to meet the needs of organic markets.

Work continues in Poland on the interconnection and use of administrative and statistical data. Once its register is improved IJHARS will be capable of forwarding data to GUS, which in turn will be able to verify its data from the FSS (excluding farms with mixed organic and conventional production). Due to statistical confidentiality requirements, the data will most likely flow unilaterally from IJHARS to GUS. A common identification number could support an exchange of statistical and administrative data but the development of an additional number seem to be unrealistic at this moment for legal and organisational reasons. The two institutions should reach agreement on use of existing numbers for data exchange and verification. Moreover, it is necessary to establish the manner in which data is use and disseminated. Another issue that needs further investigation is classification and definition of variables in both systems.

The case study on the Polish production data collection system carried out as part of Workpackage 5 showed the need to create a legislative framework to encourage certifying bodies to forward data (Gleirscher, N., et al., 2005). One solution could be to pay certification bodies for their data. At the present time, this proposal should be seen as preliminary and requiring significant regulation, including defining the party incurring data collection costs. The organic farming act could provide the basis for mandatory regulation, since it obliges certification bodies to convey 'all additional information' and data to the Chief Inspector of Food and Quality Inspection. However, without the cooperation of the certification bodies it will be impossible to implement this.

The creation of a common nomenclature and variable definitions is a condition of applying joint classifications and introducing legal instruments obliging certification bodies to forward data, as well as a mechanism for incentives / compensation for certification bodies for forwarding data.

The Polish data collection system does not yet operate well and at present it is difficult to state what the results will be. Similarly, the cooperation between GUS and IJHARS is not yet formalised and it is difficult to speak of binding decisions. It would be necessary to introduce mandatory regulations to define a general plan of the data collection system and characterise the relations between all system participants. Hence, it would not be advisable to base the recommendations on harmonisation of the data collection system in EU countries on an extensive analysis of the Polish data collection system.

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The EISfOM Framework for Harmonising Organic Farm Production Data – Do the Proposals Work for us?

Phil Stocker¹

Responding via this conference to the draft document on the EISfOM 'Framework for a European Information System for Organic Markets' it is important to be clear about who we are and on whose behalf I am speaking.

The Soil Association was founded in 1946 with a mission to research, develop and promote sustainable relationships between the soil, plants, animals, people and the biosphere, in order to produce healthy food and other products while protecting and enhancing the environment. There are two distinct parts to our organisation:

1. The Soil Association is a public and business membership charity whose activities include:
 - Educational campaigns reaching out to consumers, farmers and the food industry, opinion formers and policy makers.
 - Policy research into targeted areas of agriculture and the links with health, environment and animal welfare.
 - Promoting local food and community supported agriculture.
 - Representing organic farmers and serving their needs through providing information, training, conferences, demonstration farms, policy representation, supply chain facilitation and market intelligence.
 - Setting private standards for organic production and processing (compliant with EU regulations).

2 The Soil Association also has a wholly owned subsidiary company (Soil Association Certification Limited) which inspects and certifies farmers and processors using Soil Association standards. It has two main programmes:

- The symbol programmes using Soil Association standards.
- The global partnership programme accredited by IFOAM.

In addition, SA Certification also holds equivalent standards and inspects to general UK farm assurance schemes in order to give improved marketing opportunities.

So when responding to the draft paper, I am considering:

- Our role as a certification body where we contribute to collection of data.
- Our role as a policy organisation where we are often reliant on data.
- Our role as a farmer and business support and development organisation where we are involved in carrying out both generic and very specific market intelligence.

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- And finally, our role in representing farmers and organic businesses where we try to ensure appropriateness, relevance and simplification of data collection and market intelligence.

I believe it would be useful to reflect on the purpose of market intelligence and information around the organic market. The need for market intelligence (based on good data collection) can be identified at several levels – EU policy and regulation, member state governmental policy, NGO/development activities, business and trading activities, but its value is in enabling good decision making at all or any one of these levels. Our experience shows that, as you might expect, the broader and more generic the information is the less value it has at a local business decision-making level (even though it may still be of interest). A 100 hectare beef and sheep farmer in upland Northumbria may not be able to use to his advantage the knowledge that there are six million hectares of organic land in the EU and that this has increased by 1.6 percent over the year¹. He may, though, be very interested that the area of land in the north east of England has increased and that the majority of recently converted land is in arable lowlands from which he might access his feed and where he might find an outlet for finishing store lambs. He may be even more interested to know that over the last year there has been an increase in the number of consumers wanting to buy a wider range of regional lamb based products, and that there is an absence of these products available.

The Soil Association has produced the Organic Food and Farming report since 1998, and during that time we have been aware that the information is sometimes of more value to policy makers and journalists rather than businesses – although its impact ultimately benefits businesses. In the UK the report has been an absolute necessity and has informed many decisions taken by governments, RDAs and others, which ultimately feeds down to help those on the ground. In producing our annual report we have often struggled to get accurate baseline data, so we would value an improvement in the range and quality of statistics available and indeed have been working with Defra to achieve this. In addition to organic statistics the Soil Association is also working with Defra on its Whole Farm Approach², an initiative to centralise and co ordinate data and information.

Working with organic businesses, the Soil Association believes our next steps in terms of providing market intelligence and information are to look in detail at what is happening on a regional or devolved nation basis, and to investigate specific production lines including retail statistics, supply chain relationships, regional and local import / export levels, seasonal production trends and so on. Indications are that this detailed information will start to provide organic businesses with the type of information they need to make sound business decisions, and therefore improve the effectiveness of market intelligence and information across the board.

The Soil Association's view of the framework outlined in the draft paper is that it is of value and we offer the following response:

1 Relevant Data Collection and Processing Systems as starting points

We agree that Farm Structure Survey (FSS) data are not particularly useful for continuous observation due to infrequency and differences in methodology. However FSS does provide an 'extra check' so we would recommend an ongoing facility to identify organic activities within the FSS. Collection of data from the organic certification bodies is probably the most suitable for baseline data, however harmonisation will not be easy, updating all certification bodies information systems may be costly, and certification bodies will need to be recompensed for the work involved.

1 Soil Association (2005). Organic Market Report

2 For Further information on the Whole Farm Approach, contact Kathryn Wood at Department of Environment, Farming and Rural Affairs, kathryn.wood@defra.gsi.gov.uk

Recording movement of organic products between actors in the supply chain will be complex and add a significant amount of processing time, and we need to remember that many products are traded between actors certified by different certification bodies and across Member States. We should also consider that many businesses feel strongly that trading information is commercially sensitive and, indeed, the certification bodies are bound by data protection. This area of data collection is likely to be difficult and should not hold up the overall plans for the framework.

Overall we need to focus on who wants what information and in what format - broken down into what do farmers want, what do traders want, and what do policy makers/development agencies want. Then we need make sure the information gathered by the certification bodies delivers this. As an example, if you look at the tables on the last two pages under the livestock heading, a farmer may want to know what the value of organic livestock is or whether availability of store cattle is up or down. A processor may want to know whether he can switch to all UK sourced beef and whether that beef is within his specifications. The policy maker may simply need to know the total number of stock compared to last year, to see if policies are working.

2 Recommended Classification Systems and Procedures

In the UK Defra should be the responsible body. This should not prevent areas of work being sub-contracted, but statutory information should be reliant on a statutory body.

We would not be opposed to legislation requiring certification bodies to use a classification system based on the Eurostat database. However legislation must be supported by financial compensation and support for as long as legislative requirements last.

If this system is put in place it should be a requirement for all countries to comply immediately, i.e. we should not be using two different systems.

3 Recommended Reference Systems

Piloting and modelling systems could be valuable, although as suggested above, once the system is implemented all Member States should comply. In addition all stakeholders should play a part in defining reference systems.

4 Timing, cost frames and funding

Costs need to be broken down into system implementation, investments previously made and operation. Real costs must be met.

We agree that a combination of legal requirements and financial compensation is the key to effective EU statistics.

5 Actions Recommended on the European Level

Define a classification system to be used by all Member States and certification bodies (via Eurostat/ZMP)

The classification and codes in the proposed tables do not seem particularly appropriate for the UK - grass should be broken down into LFA/SDA and lowland permanent pasture, then rotational grass. Whether the grass is 1st year conversion, 2nd year conversion or fully organic should also be identified. The crops look fine but it would be useful to identify whether the crops were intended for feeding livestock on the farm, intended for sale, and either as feed or for human consumption. The vegetable categories generally

look suitable although it may be worth breaking them down more, such as salad crops, and a 'catch all category' is needed to ensure everything is captured. However it may be best to get a system working and then add categories later on. The livestock categories look as though they need more work or at least some good guidance notes - numbers of cows sold and numbers of heifers coming into the breeding herd would be useful, and these figures always seem to ignore what has been sold during the year and for what (heifers slaughtered, steers slaughtered etc) but this would need the certification bodies to collect significantly more information than they currently do. Livestock with a short cycle such as lambs, pigs and poultry need to be on the basis of the total number sold during the year or the highest number at any one point. The aim should be to identify what the production levels have been during the year. Monthly or quarterly sales would be useful so seasonal trends can be identified, for example what proportion of turkeys are for the Christmas market and what for Easter.

Introduce a legal requirement for certification bodies to collect and provide detailed data

Consideration needs to be given to how long this may take.

Provide financial compensation to certification bodies

This needs careful analysis. The certification bodies need to be stakeholders and involved from an early stage, and all costs need to be considered including set up costs, compensation for systems already in place, and operation costs.

Investigate the Polish system for its success and whether it could be implemented in other countries

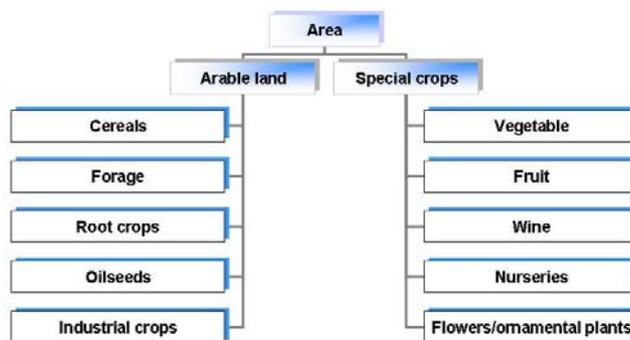
Again, the certification bodies need constant involvement: they need to be stakeholders rather than having something imposed on them.

Eurostat and ZMP Codes and Classification systems– Different Approaches and Ways to Harmonisation

Markus Rippin¹ and Diana Schaack²

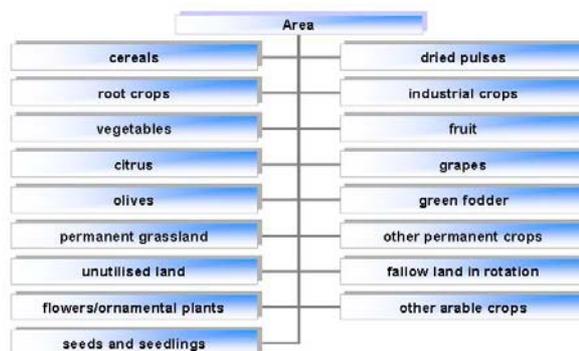
EISfOM European Information System for Organic Markets
A European Commission funded Concerted Action Project

ZMP Systematic - Area



EISfOM European Information System for Organic Markets
A European Commission funded Concerted Action Project

Eurostat Systematic - Area



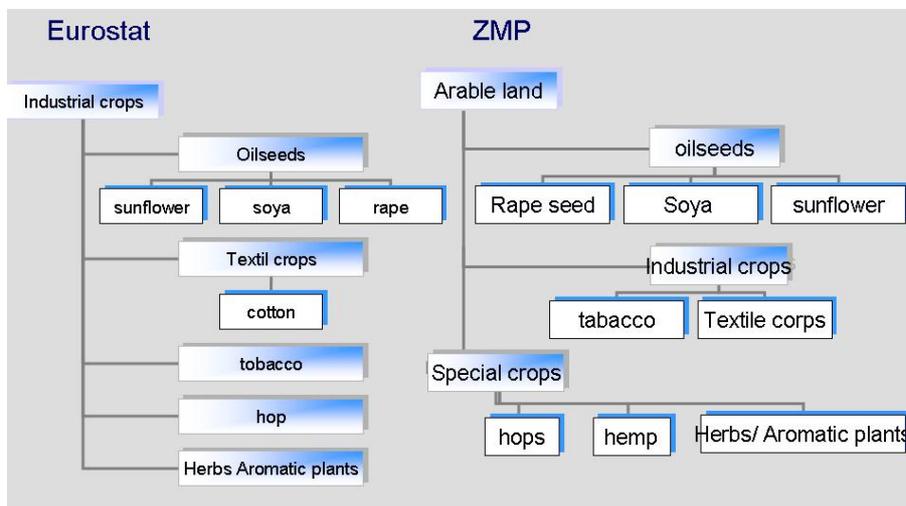
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Eurostat codex - area and cereals

ZMP	EUROSTAT Codex		crops/livestock	unit
MDB Project	CROPITEM	ZPA1 codes*		
		Hold_Hold	number of farms	number
		crop_sa	area cultivated	ha
K1	C_00	arable or D_Hold	arable land	ha
K101	not available	c0002 or F_Hold	permanent grassland (pastures and meadows)	ha
K103	C_11		extensive fruit area for processing (other permanent crops??)	ha
K105	C_12 ??	not available	set aside incl. green manure** (part of crop rotation)	ha
K104	C_14	set aside or I08	unused land (fallow land not part of crop rotation)	ha
K106	C_13	not available	other area	ha
K1_	not available	not available		
			tillage	
K1011	C_01	c1040	cereals incl. Rice	ha
K10110	C_01101	c1100	wheat	ha
K10115	not available	c1120	spelt wheat	ha
K101101	not available	c1123	winter wheat	ha
K101102	not available	c1124	spring wheat	ha
K101103	C_01101B	c1130	durum wheat	ha
K101111	C_01104	c1150	rye	ha
K1011111	not available	c1151	winter rye	ha
K1011112	not available	c1152	spring rye	ha
K101112	not available	c1212	triticale	ha
K101113	C_01102	c1160	barley	ha
K1011131	not available	c1163	winter barley	ha
K1011132	not available	c1164	spring barley	ha
K101114	C_01105	c1180	oats	ha
K101116	not available	c1219	buckwheat	ha
K101119	C_01103	c1200	grain maize, corn	ha
K101117	C_012	c1250	rice	ha
K101118	not available	c1211	sorghum	ha
K1011_	C_01106	not available	other cereals for the production of grain (incl. seeds)	ha

Industrial crops



Cereals / dried pulses

- Grain maize
 - belonging to cereals or extra group
- Dried pulses
 - Subgroup in a group "forage production" or extra group "Protein crops"
- Soya, linseed
 - Either oilseed or protein crop

Fruit and vegetables

- Citrus and olives
 - subgroups in fruits or single groups
- Vegetable
 - Classification in botanic groups or under glass and open land production or industry vegetable and fresh market vegetable
- Strawberries
 - Vegetable or fruit (no permanent culture)

Eurostat codecs – forage/root crops

ZMP MOB Project	EUROSTAT Codecs CROPITEM	ZPA1 codecs*	crops/livestock	unit
			tillage	
K1012	C_10	c2600	fodder/protein crops (excl. seeds) from arable land	ha
K101210	C_10011	Z1200	fodder maize, green maize (maize for silage)	ha
K101212	not available	c1155	maize	ha
K101215	not available	c2671	clover, clover grass and mixtures	ha
K101213	C_10021	c2610/c2721	fodder from arable land/grassland (temporary grasses and gra	ha
K101211	C_02	not available	dried pulses	ha
K1012113	not available	c1330	field bean	ha
K1012111	not available	c1320	field pea, grey pea	ha
K1012114	not available	c1343	lupins	ha
K1012115	not available	c2672	lucerne	ha
K1012__	not available	c2612	other fodder incl. protein crops for production of grain	ha
K1014	C_03	c1350	root crops	ha
K101410	C_0301	c1360	potatoes	ha
K1014101	not available	not available	fresh market	ha
K1014103	not available	not available	processing for food use	ha
	C_0302	not available	beets	ha
K101411	C_03021	c1370	sugar beet (excl. seeds)	ha
K101412	C_03022	c1381	fodder beet	ha
K1014__	C_0304	c1382/c1390	other root crops	ha

Eurostat codexs – oil seeds/other crops

ZMP	EUROSTAT Codexs		crops/livestock	unit
MDB Project	CROPITEM	ZPA1 codexs*		
K1013	C_0401	not available	oilseeds	ha
K101310	C_04013	not available	rape and turnip rape	ha
K1013101	not available	c1430	rape	ha
K1013102	not available	c1420	turnip rape	ha
K101312	C_04011	c1450	sunflower seeds	ha
K101311	not available	c1460	oil flax	ha
K101314	C_04012	c1470	soya bean (fodder and processing)	ha
K1013_	not available	c1480	other-oilseeds	ha
K101502	C_0403	c1550	tobacco raw (including seedlings enclosures)	ha
K1028	C_0404	c1560	hops	ha
K1023	not available	c1530	hemp	ha
K1015	C_04	c1400/c1570	industrial crops	ha
K101503	C_0402	not available	textile crops	ha
K101501	C_04021	not available	cotton (deseeded)	ha
K1015	C_0405	c1570	other industrial crops	ha
K1024	C_04051	c1580	official herbs, aromatic plants, medicinal, culinary plants	ha

Eurostat codexs – special crops

ZMP	EUROSTAT Codexs		crops/livestock	unit
			special cultures	
K1022	not available	fruit/g01 or L2002	fruits and berries	ha
not available	not available	c2040	fruit trees (excl. Olives and citrus)	ha
K102213	C_07	c2300	citrus fruit	ha
K1022131	not available	c2320	oranges	ha
K1029	C_09	c2450	olives	ha
K102901	C_0901	g03a	table olives	ha
K102902	C_0902	g03b	oil olives	ha
not available	not available	c2002	fresh fruit	ha
K102210	C_06111	not available	pip fruit / pome fruit	ha
K1022101	C_061111	c2090	apples	ha
K1022102	C_061112	c2095	pears	ha
K102210_	not available	not available	other pip fruit	ha
K102211	C_06112	c2170	stone fruit	ha
K1022111	not available	c2200	cherries	ha
K1022112	not available	c2180	peaches	ha
K1022113	not available	c2190	apricots	ha
K1022114	not available	c2221	nectarines	ha
K1022115	not available	c2210	plumbs	ha
K102211_	not available	c2229	other stone fruit	ha
K102212	C_062	c2270	soft fruit/berries	ha
K102116	C_052	c2260	strawberries	ha
K1022121	not available	not available	blueberries	ha
K1022122	not available	c2285	kiwis	ha
K1022123	not available	c2420	table grapes	ha
K102212_	not available	c2290	other soft fruit	ha
K1025	C_08	g04c	grapes	ha
K102214	C_0612	c2230	nuts	ha
K1022_	C_0613	c2250	other fruits	ha
K1025	C_08	c2410	vineyards	ha
K1026	not available	g05	nurseries	ha
K1027	C_15	d16_17	flowers (excl. nurseries)	ha
K1016	C_17	d19_20	seeds, seedlings on arable land	ha

ZMP/Eurostat systematic - livestock



Livestock

- Classification in total production per year or average stock
 - Importance for pigs and poultry
- Classification in weight or age
 - Bovine animals and pigs

Eurostat codex – bovines/pigs

ZMP	EUROSTAT Codex	crops/livestock	unit
		Livestock	
K211	L_1	v10/pp0000 bovine animals total	head
K212	L_11	not available bovine animals for meat production	head
K2111	v13/pp3220	cows	head
K211101	L_12	p3221 dairy cows	head
K211102	L_13	p3222 suckler cows	head
K211211	not available	v16 calves	head
K2112111	not available	pc100 calves for slaughter	head
K211212	not available	pc2000 bovine animals aged between 1 and 2 years	head
K2112121	not available	pc2100 male	head
K2112122	not available	pc2200 female	head
K211213	not available	pc3000 bovine animals of 2 years and over	head
K2112131	not available	pc3100 male	head
K2113	not available	v12 bulls for breeding	head
K2112132	not available	pc3200 female	head
K21201	L_14	not available young bovine animals	head
K211	L_15	not available other bovine animals	head
K221	L_2	v20/pp0000 pigs	head
K2212	not available	pp4200 sows total	head
K21201	L_22	pp4210 breeding sows	head
K2213	not available	pp1000 piglets with a live weight of less than 20 kg	head
	not available	pp2000 piglets with a live weight of 20kg and less than 50 kg	head
K2211	L_21	pp3000 fattening pigs (of at least 50kg??)	head
K221101	not available	pp3100 fattening pigs between 50 and < 80kg	head
K221102	not available	pp3200 fattening pigs between 80 and < 110kg	head
K221103	not available	pp3300 fattening pigs of at least 110 kg	head
K221	L_23	not available other pigs	head

Eurostat codex – other livestock

ZMP	EUROSTAT Codex	crops/livestock	unit	
K231	not available	v30	sheeps and goats	head
K2312	L_4	pg0000	goats total	head
K231201	L_41	not available	goats breeding females	head
K2312__	L_42	pg2000	other goats	head
K2311	L_3	ps0000	sheeps total	head
K231101	L_31	not available	sheep breeding females	head
K231102	not available	v33	lambs	head
K2311	L_32	ps2000	other sheep	head
K241	L_5	v50	poultry total	head
K241103	L_51	not available	broilers	head
K241101	L_52	ea15/ph1000	laying hens	head
K241__	L_53	not available	others (turkeys, ducks, geese,...)	head
K24101	not available	ea17	chicks for laying	head
K24103	not available	ea28/ea39	chicks for fattening/fryer	head
K2413	not available	ea 48	dugs for fattening	head
K2414	not available	ea58	geese for fattening	head
K2412	not available	ea68	turkeys for fattening	head
K251	L_6	not available	equidae	head
K271	L_7	not available	rabbits	head
K27101	L_71	not available	breeding females	head
K271__	L_72	not available	other rabbits	head
K243	not available	b4700	eggs****	piece
K213	not available	ml001	cows milk on farm****	kg
not available	not available	mc001	cows milk collected****	kg
K261	L_8	J18	bees	colonies
K2__	L_9	not available	other livestock	head

Example: Hierarchic codes ZMP

eKultur	Kultur_E	levelKultur#	codelengthKultur
K	crop/animals	0	1
K1	area	1	2
K1__	other area	3	4
K101	arable land	2	4
K101__	other arable crops	2	4
K1011	cereals	3	5
K1011__	other cereal	4	7
K101110	wheat	4	7
K1011101	winter wheat	5	8
K1011102	spring wheat	5	8
K1011103	durum wheat	5	8
K101110Δ	Δ wheat	5	8
K101111	rye	4	7
K1011111	winter rye	5	8
K1011112	spring rye	5	8
K101111Δ	Δ rye	5	8
K101112	triticale	4	7
K101113	barley	4	7
K1011131	winter barley	5	8
K1011132	spring barley	5	8
K101113Δ	Δ barley	5	8
K101114	oats (winter and sprin	4	7
K101115	spelt wheat	4	7
K101116	buckwheat	4	7
K101117	rice	4	7
K101118	millet	4	7
K101119	grain maize	4	7
K1011ΔΔ	Δ cereals	4	7

Aim and possible solution

- Aim: unic classification system for whole Europe and different data collecting systems (FFS, FADN, consumer data)
- Transition period: using of code tables
- **Agreement** on crop/livestock codes or at least on **crop/livestock groups**
 - with room for each country in the subgroups
- leave room for missing codes and deeper hierarchies

Discussion

- Crop
 - Dried pulses and forage classification
 - corn maize, soya
 - Vegetable and fruit groups
 - Strawberries
- Livestock
 - Weigth or age classification
 - Total production or average stock
- Depth of hierarchie Europe wide and country wide

Estimating Supply and Demand in Scotland's Organic Sector: The SAC Organic Market Link Project

Caroline Bayliss¹

Introduction

Marketing has been identified as the most challenging issue for most of Scotland's organic producers. After developing their organic practices through the conversion period, Scottish producers then struggle to sell their produce. Lack of price premiums and poor availability of market outlets are cited as major problems. The poor availability of supply and market information contributes to this overall problem.

Organic Market Link (OML) Project

In response to this, SEERAD and Scottish Food & Drink Organic Project funded a one-year Organic Market Link Project during 2004. Its remit was to improve the marketing of organic produce in Scotland, particularly in the finished beef, finished lamb and grain sectors, by improving the flow of information between producers and traders and processors. In early 2005, the OML project was established as an on-going project within the Scottish Executive funded programme of organic farming advice provided to Scottish farmers by SAC.

Methodology

Supply data

Supply data was gained through a postal survey sent to over 650 licensed organic producers in Scotland during May 2004. The aim of this was to quantify seasonal patterns of supply from July 2004 to June 2005 in the three sectors targeted (finished beef, finished lamb and grain/pulses). Producers who did not respond to the postal survey were telephoned individually to obtain their information. In 2005 the survey was expanded to encompass supplies of store cattle and store lambs too.

Demand data

It is important to generate demand data as organic producers must have a clear indication of the markets that are available for their produce and they should be aware of the quality standards and specifications their products must meet to be acceptable for a specific market. However, it should not be assumed that all organic produce is in demand, as failure to meet market requirements will undoubtedly have a significant impact on business profitability. To gain an understanding of the levels and nature of demand for Scottish produce and products, on-going contact was established and maintained with the meat trade and the grain trade. This was initially through an introductory letter, followed with phone calls and e-mails. Face-to-face meetings were also held wherever possible. Later on, contact with meat buyers from the multiples was also instigated.

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Results and discussion

The initial response from the postal survey of producers was about 40 percent. After more than 400 subsequent telephone calls to non-respondents, the final response rate for this survey was 95 per cent. Clearly this was a very time-consuming process. Nevertheless, the 2004 survey provided valuable data on regional and monthly patterns of production and demonstrated continuity of supply, especially in the beef sector. Furthermore, it estimated the amount of organic grain being produced in Scotland for the first time. Information gathered over the last two years has proved to be an invaluable tool to assist marketing. The data provide processors with the necessary confidence in continuity of supply of product. The project also facilitates farmer-to-farmer trading of grain for feeding, and of store animals. Matching up store producers and finishers is an important aspect of the OML project as, due to Scotland's topography and climate, many farmers are not able to take their livestock through to finishing. However, gathering this data proved to be very time-consuming; more than 400 organic producers were telephoned last year and data for this year are still not yet complete.

The supply and demand data generated in these surveys are disseminated in periodic producer newsletters sent to all organic producers in Scotland and to traders and processors. In addition data are disseminated through producer seminars.

This project has provided valuable information to Scotland's organic sector and its benefits are recognised by most stakeholders. However, the methodology used, particularly follow-up telephone calls, is very time-consuming and an alternative method of gathering the data is necessary. In theory such data could be estimated from annual farm returns submitted by producers to certification bodies, but there are major data protection issues in this.

From Agricultural Census Data towards Harmonised Organic Production Data

Arthur I.M. Denneman¹

Harmonised organic production data: a central role for a panel of experts

In the Netherlands several organisations are involved in compiling data on organic farming. In principle, each organisation should use the same classifications for organic farming as for total farming (= conventional + organic). Statistics Netherlands is responsible for the compilation and dissemination of total farming data based on the annual Agricultural Census (integral survey, excluding the very small farms with minor production). To enhance the use of harmonised classifications and definitions, and to improve the quality of existing data, a panel of experts should have a central role in the compilation process for annual organic production data. For instance, for crop production estimates the procedure might go as follows:

Using the annual Agricultural Census, three groups of certified farmers are identified: (i) the ones that are entirely 'fully converted', (ii) the ones that are entirely 'in conversion', and (iii) the mixed ones (e.g. a farm with fully converted cereals, vegetables that are in conversion and conventional livestock). All 'mixed ones' receive an extra questionnaire to subdivide their crop areas (and number of heads) into conventional, fully converted, and in conversion parts.

The crop areas observed by the Agricultural Census are used in several statistical surveys on Dutch crop production (total farming). For instance, a farm with ten hectares of green maize, receives an extra questionnaire to fill in its harvested production. Some of the questionnaires received have been completed by organic farmers. For some crops this may lead to a rough estimate for the organic crop production per hectare. For instance, ± 750 farmers completed the questionnaire on apple production. Say two percent of this group of farmers is certified. By comparing the 'production per ha' figures of these 15 organic farmers with the ones of the other 735 farmers, one might obtain results like: the organic apple production per ha is 70 percent of the conventional apple production per ha.

For each crop: 'the rough estimate for organic production per hectare' multiplied by 'the fully converted crop area in the Netherlands' equals 'the Dutch organic production'. To improve the quality of these rough organic production estimates, the results obtained should be discussed by a panel of experts from different organisations. These experts should take into account: (i) the relevance, timeliness and completeness of these figures (do they meet users' needs?), (ii) the accuracy of the figures used (e.g. the observed organic crop areas should be compared with available inspection data from the national certification body on organic farming), (iii) the accessibility of organic production data (which organisation is responsible for national dissemination and transmission to the European Commission?), (iv) the comparability across space and over time (by emphasizing the usage of harmonised classifications and definitions) and (v) the coherence of organic production data with respect to other data (like total & organic farming data from other sources, e.g. on consumption, import/export, prices, and production).

The final results of a panel discussion are the best estimates possible for organic crop production. This implies that the first rough estimates are adjusted somewhat, whereas empty cells in the original data set are replaced, if possible, by data from other sources.

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Information System for Organic Markets in Lithuania

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Problems / Aims

The Lithuanian governmental institution 'Centre for Agricultural Information and Rural Business', in cooperation with the other related institutions via the Order of the Minister of Agriculture No. 3D-156 of 8 April 2004, is responsible for the following functions: collecting, pooling, storing, processing and analysing data specified in EU regulations about amounts and prices of procured raw agricultural production, amounts and wholesale prices of products produced, retail prices of agricultural and food products, input prices and prices in the domestic market as well as ecological products and other necessary data, which are provided by enterprises and other data suppliers, preparing reports to the European Commission, other institutions or data recipients, preparing and publishing official statistical bulletins. The 'Agri-Information and Rural Business Centre' has been collecting data this data since April 2004. The mission of the Institution is firstly to meet the requirements of national users – the state administration, government, statistical and other institutions and individual farms - for information on the agricultural and food products market.

Methodology

Data is transmitted in according with the regulations approved by the Minister of Agriculture of the Republic of Lithuania which stipulate the procedure for data transmission to the data manager in terms of organic production, buying, selling, processing and prices. Reports prepared on the basis of accumulated data are submitted to ŽŪMPRIS manager. The methods of operational research are: analysis of risk factors; statistical data analysis. To ensure the reliability of data transmitted by legal or natural persons, data is revised. Control of the data reporting in the Lithuanian MIS is in accordance with the legal basis, i.e. the orders of the Ministry of Agriculture for inspection of data suppliers and for the inspection function.

Results

In the organic farming sector production data is supplied by certified companies and organic farms on production, processing and trading. Data on the size of the certified organic crop area and crop output is supplied once a year; data on the quantity of resource buying, selling, processing and average prices are supplied once per month. Data is transmitted in the approved form via an interactive data input system (IDIS) at: www.vic.lt/ris/registruotiemsnaudotojams. If technical difficulties mean that IDIS is not available, data is transmitted by e-mail eko@vic.lt, fax or any other means.

The data manager makes cumulative reports and transmits them to ŽŪMPRIS manager, the Department of Statistics and other institutions indicated by ŽŪMPRIS manager. Reports are available on the web at www.vic.lt/ris and are published in 'Agrorinka'. The data supplied are used for Lithuanian policy making for the organic sector and reports are submitted to the institutions of the European Union.

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Characteristics of the organic data flow in Flanders: AMS: a key actor in Flanders for monitoring, reporting and analysis of organic data

Vincent Samborski¹, Koen Carels, Dirk Van Gijsegem

AMS, the engineering and design department of the Flemish (regional) agricultural administration, collects the available data, converts it into useful information, and disseminates it in two ways:

- supporting policy: an upward reporting of the organic sector. Policy needs a permanent monitoring of the organic sector: only observations that cover a range of several years can lead to reasonable and reasoned policy making. Reporting to the EC can also be seen in this way.
- reporting to the 'public': downward reporting. Dissemination through the internet (*accessibility*) gives AMS the opportunity to reach a broad 'special interest' public like farmers, universities, independent organic farming associations, researchers.

A second task of AMS is to improve data quality. This is done in several ways and with attention to the quality criterion proposed at the 1st EISfOM seminar:

- supply to the database of the situation at 31 December. Publication of results one month later. (*timeliness/punctuality*)
- checking the data against preceding years and explaining the observed trends (*coherence*)
- checking with other data sources (e.g. European) and explaining differences in results (*comparability*)
- reducing estimates to a minimum (*accuracy*)

The third and most important task is to link the observations to organic farming policy². Are the objectives attainable, taking into account current changes? Is the financial support to the sector distributed to the right beneficiaries?

Our recommendations

To improve the existing data collecting systems, we have the following recommendations:

- centralisation of data collection: if data collection, and conversion of that data into information, is done by the same organisation, coherence increases because the information is less contradictory.
- integration of FADN into an organisation responsible for the centralisation of data collection: FADN is the only short-term possibility to collect micro-economic, social and environmental data. It is important for those who report on the organic sector to be able to access FADN data easily (software).
- instead of trying to collect the maximum amount of information, it is advisable to determine a set of (output and result) indicators (for each level in the chain) that is representative for monitoring the development of organic farming. (e.g. cost per capita, share of in-conversion area...).
- application of quality control using the same indicators in all European countries.

References

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2 Our main task is monitoring. So far there has been no structured evaluation of organic policy in Flanders. Some measures are evaluated occasionally when needed by the policy makers.

The Organic Market in Croatia

Sonja Karoglan Todorovic¹ and Darko Znaor²

Land use and production

The Croatian organic agriculture sector is still in an early stage of development but has recorded a rapid expansion over the last three years. According to the estimates of the Ministry of Agriculture, Croatia has some 7'000 hectares under organic management managed by some 250 (mostly family) farms. Cereals seem to account for more than 70 percent of the total organic production in Croatia.

State regulations and support

Organic farming in Croatia is regulated by the Law on Organic Agriculture adopted in 2001. In 2003 the government introduced subsidies to support organic farming (400 EUR/ha of arable land). This had a great impact on the development of the sector and the area under organic management in 2003 has increased tenfold as compared to 2002.

Inspection and certification

Croatia has a fully functioning domestic inspection and certification system. There are six inspection and two certification organisations accredited by the Ministry of Agriculture.

Market and consumers

Data about the organic market as well as a thorough market analysis do not exist and the value of the Croatian organic food sector is difficult to estimate. Almost all products are sold on the domestic market. The price premium is in the range of 50 to 100 percent. Only a few organic enterprises export their products and these are mostly herbs and spices. The total export value in 2003 was about 0.65 million EUR. Organic produce is sold either directly at the farm and farmers' markets or at numerous health food shops. Almost all supermarket chains also sell organic products but most of these are imported. Imported organic food includes pasta, cereals, juices, sweets, biscuits and soy products. Not a single shop sells organic fruit, vegetables, meat and dairy products.

Organic data collection

There is no structural data collection on organic agriculture in Croatia. Production data are based on the information recorded by the inspection and certification bodies which have to report to the Ministry of Agriculture. The Croatian Statistical Office so far has not collected any data on organic farming but preparations have been made to start with collection of some basic production data. Data on the market volumes, imports and exports as well as price statistics are not yet available. Several private market information companies occasionally conduct surveys on consumer attitudes and behaviour related to organic products. Ecologica, one of the leading organic organisations in the country has also started data collection on organic production, marketing and consumer attitudes.

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Farm Level Production Data in Latvia's Organic Farms

Livija Zarina¹

Problems / Aims

In Latvia, as in others countries, increased consumer awareness of food safety issues has meant that it is accepted that agricultural production should be in balance with the whole ecosystem. However, there are also some important problems:

- - processing and marketing are poorly developed;
- - there is a lack of certified organic seed;
- - there is a low level of research, education and knowledge among farmers and consumers.

Methodology

In order to promote organic farming, a development programme for the period 2003-2006 is being prepared by the Ministry of Agriculture, defining the main targets and tasks of organic farming:

- to devote three percent of the agricultural land (= 56'000 hectares) to organic farming by 2006;
- to stimulate the diversity of organic farming products within seven product groups (cereals, milk, meat, eggs, vegetables, food supplements, honey) and to raise the total sales volume to two percent of the total agricultural production sold on the domestic market;
- to ensure that by 2006 ten percent of consumers regularly purchase organic products;
- to improve the certification system and to have it accredited;
- to create a system of education, research and consultation in organic farming;
- to integrate the health and education programmes into the same economic sector.

For information see www.ekoprodukti.lv, the internet site of the Latvian organic farmers' organisation.

Results

Over the last few years organic farming in Latvia has grown rapidly: in 2004 the number of organic farms was 1043, and the ecologically cultivated area amounted to 43'982 hectares.

The size of the organic farms varies, ranging from 1.5 ha for the smallest farms and 595 ha for the largest. 48 percent of certified farms are in the range 20 to 100 ha, while 44 percent of farms have less than 20 ha of land.

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The structure of organic farms according to production type:

- crop farming 36%
- dairy farming 31%
- cattle breeding 9%
- vegetable growing 8%
- fruit growing 8%
- pig breeding 6%
- poultry farming 5%
- bee-keeping 3%
- sheep breeding 3%
- goat breeding 0.8%
- horse breeding 0.1%
- rabbit breeding 0.1%

Organic farmers in Latvia grow a very diverse assortment of field, vegetable, fruit, ornamental, and culinary plants: 21% of the farms produce cereals. Grain-producing farms grow rye and wheat for baking bread as well as oats and barley for fodder. Most of the grain production ends up in the fodder racks and provides self-produced fodder. In 2004 a total of 5002.8 tons of organic cereals was produced (Klavinska, 2005):

- wheat: 1102.6 t
- rye: 868.3 t
- barley: 1034.7 t
- : 265.3 t
- oats: 1436.7 t
- buckwheat: 295.2 t
- rapeseed

Vegetables and fruits are the products with the highest demand: the main crops are potatoes, onions, carrots and beets. Early vegetables, cucumbers, tomatoes and sweet pepper are grown in greenhouses. The main livestock species are: dairy cows, beef, pigs and poultry. Animal farms produce organic milk as well as beef, pork, mutton, and rabbit meat. Different types of honey, pollen and beeswax products are also popular.

In Latvia there are only eight organically certified processing enterprises: two slaughterhouses three , bakeries, two milk processing establishments, one honey producer. There are several support systems and development programmes to promote organic farming:

- Rural development plan
- State subsidy programmes for agriculture
- Action plan for organic farming
- Long-term agricultural investment programme

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WWW.EKOPRODUKTI.LV

Group 2: Farm Financial Data

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EISfOM Recommendations Concerning Farm Financial Data

Nicolas Lampkin¹

Farm financial data (outputs, inputs, prices, subsidies, incomes etc.) are important for decision-making by policy makers (in terms of setting support levels and simulating responses of farmers to policy changes), by producers (in terms of deciding whether to convert, or whether to modify existing organic systems and improve performance of farms, e.g. through benchmarking), and in the market place as costs of production are a contributory factor in transparent price setting. There is a good history of production of farm accounts data for agriculture in general, at both national and EU levels, on which initiatives for organic farming could be based.

Relevant DCPS as starting points

There are three main sources of financial data on organic farming:

- a) specific research projects conducted by research institutes, universities and consultants;
- b) national farm accounting data collection and
- c) EU-FADN.

The results from some of these studies have been reviewed by Lampkin and Padel (1994), Offermann and Nieberg (2000), Nieberg and Offermann (2003) and new work by Nieberg *et al.* (2005). There have also been a number of recent reviews of issues relating to the collection of organic farm financial data, in particular the earlier EISfOM work (Recke *et al.*, 2004a) including EU-FADN perspectives (d'Avino, 2005); the methodology and data fact sheet for IRENA indicator 5b (Lampkin and Offermann, 2005); the TAPAS review of organic farm income and price data (Bont *et al.*, 2005) and a paper presented to this year's PACIOLI workshop (Offermann and Lampkin, 2005), which forms the basis for the recommendations in this paper.

These reviews point to a steadily improving situation with respect to the availability and quality of data, building on well harmonised survey systems at national and EU (FADN) levels, particularly with the requirement from EU-FADN since 2000 that all organic holdings submitted by member states should be identified, but that there are a number of key issues that need to be addressed in order to have confidence in the results that are being obtained.

Problematic areas and barriers

The key problem areas that have been identified are:

- a) recruitment of organic producers for special surveys
- b) comparability of definitions between countries when using special surveys or national FADNs.
- c) correct identification of organic producers in national and EU-FADN samples, in particular in situations where holdings have mixed conventional and organic management

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- d) small sample size and non-representative organic samples in national and EU-FADN samples which are focused on agriculture in general, not specifically organic farming.
- e) Farm size and type definitions based on conventional standard gross margins
- f) Appropriate comparisons with results from conventional farms
- g) Limited availability of time series data
- h) Accounting for income from non-farming activities (e.g. on farm retailing, processing, tourism etc.) which may be more significant on organic holdings (some indication for this is available from Farm Structure Survey data).

Options to address some of these problems are set out in the next section.

Recommended classification systems and procedures

- a) recruitment of organic producers for special surveys
 In some countries, organic producers, particularly horticultural producers, have been reluctant to participate in farm accounts surveys due to a perceived lack of benefits – very limited financial support from government and long time lags before results are available are key issues, together with a traditional assumption that producers are not paid for participation. **The issue of appropriate incentives**, or at least making data available in a form that is more immediately useful to participants, **needs to be addressed.**
- b) correct identification of organic producers in national and EU-FADN samples, in particular in situations where holdings have mixed conventional and organic management
 Since 2000, EU-FADN has required all member states to identify organic holdings included in the data submitted, which has led to identification of all organic holdings in national surveys that contribute data. Where organic holdings are 100 percent organic, and an appropriate definition, such as certified according to EU Reg. 2092/91 is used, there is no major problem, although there is still a need to separately identify holdings that are in conversion – particularly in situations where there has been a rapid growth in the organic sector which means in conversion holdings, with their very specific financial circumstances, may dominate the samples. The more serious problems arise where holdings have mixed organic, conventional and in-conversion management, and simply identifying the holding does not indicate the management status of individual production enterprises. **A coding system that allows organic and in-conversion status of individual products** (or production enterprises) **should be introduced**, especially for major enterprises such as wheat, milk, potatoes etc. where financial data on a wider national and European basis would be useful. Offermann and Lampkin (2005) present further details on this.
- c) small sample size and non-representative organic samples in national and EU-FADN samples which are focused on agriculture in general, not specifically organic farming.
 Because organic farms are not selected specifically to be representative, but occur in national surveys and EU-FADN by virtue of their proportion in relation to agriculture as a whole, it is not possible to be confident that the organic samples contained in these surveys are representative, and it is often the case that the sample size is too small to allow differentiation by farm type and size (because of the relatively small number of holdings in many countries). This precludes the more detailed analyses which are possible for agricultural holdings in general, and which would provide more useful information for producers and policy-makers. There is therefore a **need to increase the number of organic holdings surveyed** (beyond their proportion of general agriculture, except perhaps in countries such as Austria or Switzerland where near to ten percent of holdings are organic). There is

also a need to **ensure that these holdings are sampled on a representative basis**. The over-sampling of organic farms suggested will however impact on the overall national and EU-FADN samples, which means that **the use of appropriate weightings needs to be made possible** so that data for all available holdings can be retained in key databases to enable specialist analyses. This may be easier to implement at national level taking account the specific circumstances of the organic samples in individual countries, but if the over-sampled holdings are reported to EU-FADN and would usefully be retained to be accessed at EU level, then adjustments to weightings at EU level might also be necessary – the cost implications of adjusting weightings at national or EU-FADN levels would also need to be assessed.

- d) Farm size and type definitions based on conventional standard gross margins
Currently farm type and size classifications are based on European Size Units derived from standard gross margins for agriculture in general. It can be argued that for organic agriculture, with different prices and gross margins, and possibly a greater prevalence of mixed farms, this basis for classification is inaccurate and may lead in particular to smaller organic holdings being excluded because they fall below the inclusion thresholds, even though their business size might in reality be higher taking account of premium prices and non-farming activities (see below). However, it is not clear that defining a separate classification system with organic standard gross margins is the solution. Given that classification systems are currently under review in the wake of CAP reform, it is probably preferable that **the organic holdings issue should be considered specifically as part of this review**.
- e) Appropriate comparisons with results from conventional farms
For both policy-making and producer decision making with respect to conversion, it is important that any comparisons with conventional (or general agriculture) farm data are reliable. Comparisons need to reflect the differences in the management systems adopted, but not be distorted by differences in resource endowment (e.g. land area and quality, quotas) which are typically independent of the management system. **We recommend a system of comparing data for individual organic holdings against clusters of similar conventional farms**, and where group averages are presented, the average for the group of organic holdings would be compared with the average of the appropriate conventional farm clusters. This approach is preferable to paired farm comparisons, where differences in management ability may distort the results, and between simple group averages for organic and conventional farms, where differences in the structure of the samples (e.g. different prevalence of farms of certain types) may also distort the results. Full details of our recommended approach are given in Offermann and Lampkin (2005) and in the IRENA Indicator 5 MFDS (Lampkin and Offermann, 2005).
- f) Limited availability of time series data
It is desirable to be able to look at trends over time, also for identical samples. This is difficult at present due in part to the problems above, but also due to rapid changes in the organic sector in many countries. In addition, special studies, or one-off research projects, are often time limited and the results rapidly become out-of-date. As the growth in organic farming stabilises, and if the recommendations above are implemented, it should become easier to access reliable time series data, but there is **a need to ensure that surveys implemented are on-going, not just for a limited time frame**.
- g) Accounting for income from non-farming activities (e.g. on farm retailing, processing, tourism etc.) which may be more significant on organic holdings (some indication for this is available from Farm Structure Survey data).
This issue is also a developing one for conventional production as a result of CAP reform, and needs

to be addressed as a part of the general review of FADN, but with the possibility of specifically identifying organic farming related activities.

Recommended reference systems

The approach adopted by Offermann and colleagues at FAL Braunschweig in Germany, also adopted in modified form by Jackson et al. (2005) for a special survey of organic farms in England and Wales, reflects the issues discussed in this paper can be used as a reference basis.

Good experiences with analysing organic farm financial data have also been made in Switzerland at FAL, in Germany (Agrarbericht), and in Austria, Netherlands and Denmark. Further information on these can be found in the various Offermann/Nieberg publications and the TAPAS review (Bont et al, 2005).

There needs to be a strengthening of links between these positive experiences, in particular through ongoing discussions in the Pacioli network and through EU-FADN co-ordinated initiatives.

Actions recommended at European level

There is a need to review experiences with the identification of organic holdings in EU-FADN since 2000, and to prepare harmonised proposals for changes to identification procedures in line with the above recommendations.

There is a need to review the issue of Standard Gross Margins as a basis for classification of organic farms.

There is a need to agree a standardised procedure for selecting comparable organic and conventional farms to use as a basis for making data available via the EU-FADN website.

There is a need to review and implement appropriate procedures to permit over-reporting of organic farms by member states and to adjust for this with appropriate weightings rather than excluding organic farms from the EU-FADN database.

Time, cost frames and funding

The main proposals can be achieved within the framework of national farm accounts surveys, particularly if supported by a requirement for changes from EU-FADN. There will be a cost associated with increasing the number of organic farms survey, but if fully integrated within existing national surveys this is likely to be less expensive than commissioning special studies, particularly ones which are time limited and become outdated.

There will be a cost to modifying survey instruments, sampling frames and computer software to integrate the changes, but these could be moderated if implemented in conjunction with other changes resulting from the review of FADN following CAP reform.

The major issue is therefore to make proper accounting for organic holdings a policy priority for EU-FADN, with the aim of deciding procedures in 2006 and implementing them (given the need for legislative amendments) from 2008(9?).

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'Organic' Sampling and Weighting in Farm Accountancy Data Networks – A Discussion Note on Standard Gross Margins and Calibration

Beat Meier¹

Introduction

Farm Accountancy Data Networks (FADN) in European countries are considered a valuable source of information on organic farming. As FADN samples are based on stratified selection plans (dimensions: type/region/size) and results are calculated using post-stratification weights (N/n per cell or stratum), attention must be paid to the many aspects of representativity when analysing organic farming or designing improved sampling. This discussion note deals with the aspect of standard gross margins (SGMs) which plays a key role in stratification processes and presents calibration as a flexible alternative to post-stratification in weighting procedures.

Standard Gross Margins (SGMs) for organic activities?

SGMs are calculated for specified agricultural activities (crops per hectare and units of animals) as the margin between gross output and direct inputs. The SGMs are regional averages over several years and no distinction between organic and conventional activities is made. Using these 'general' SGMs, the determination of farm type and farm size in European Size Units (ESUs) are not 'correct'; it is obvious that gross output and direct inputs can be very different for organic and conventional farms. Furthermore, stratification for selection plans and weighting systems in FADN are based on the criteria farm type and farm size, which means that 'wrong' SGMs lead to problems in sampling and calculating weighted results.

To overcome these problems, de Bont et al. (2005, p. 52, 56) suggest calculating SGMs separately for some major organic and conventional activities (on a voluntary basis and mainly for scientific purposes).

This can be very interesting for specific micro-economic analysis and for a better understanding of the mechanisms behind the EU farm typology, but I would be very reluctant to modify the official farm typology and farm size determination for Eurostat and FADN purposes with 'organic' SGMs. The main arguments to take into account are:

1. SGMs are never 'true' for an individual farm or farming activity. Even if they are a correct regional average for a given period, this average is an **artificial** tool used for typology and for measuring economic size.
2. The variation of gross margins for one activity within a region and a given period is influenced by **many factors**, organic production being one of them. Other factors may be the technology used, managerial ability, marketing aspects from buying inputs to selling to different market segments or the role of the activity in the overall farm concept. Depending on the research purpose, very different factors will provide the best explanations.

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- From the perspective of the ‘average’ **end user** of Eurostat or FADN statistics, it is hardly desirable to add complexity to the present farm typology methodology. In the current system, two farms in a region will end up in the same type and size class if they are physically identical in terms of land use and livestock, even if one is organic and the other conventional. Looking at the economic results, the variable ‘organic’ might explain major differences within this type/size group. If the information on organic status were included at the SGM level, the two farms might belong to different farm types and size classes. Whereas the economic results in a group by type and size are more homogeneous (at least at the gross margins level), the physical structure within the group becomes more diverse. Only knowledge about different SGMs used for organic and conventional farms can help to explain why physically very different farms are in the same group. I assume that the ‘average’ user of statistics is not in a position to make the necessary distinctions.

Calibration as an alternative to post-stratification weighting

European FADNs are normally based on stratified selection plans, where farm type, farm size and region are used to define the strata. The probability of selection of a specific farm is mainly determined by this selection plan but is also influenced by non-response and other survey errors¹. In order to take into account these different selection probabilities, the common procedure in FADNs is post-stratification. The weights are calculated for strata defined by farm type, farm size and region.

If organic and conventional farms have different selection probabilities, post-stratification would involve splitting the original weighting strata defined by farm type, farm size and region into **organic and non-organic substrata** and recalculating the expansion weights for the substrata (number of population farms/number of sample farms). In many situations, this kind of post-stratification is efficient, easy and comprehensible. Problems may occur when organic and non-organic substrata become too small or when additional criteria like the age structure need to be incorporated as well.

The concept of calibration

An alternative to post-stratification is calibration. This approach has been described by Lundström and Särndal (2002) and refers to a basis in Deville and Särndal (1992) and Deville *et al.* (1993). The basic idea of calibration is explained here for estimating a population total. For a study variable Y (e.g. the total direct payments for organic production) the unknown sum Y_{Σ} of the population is to be estimated from a sample with n elements. All values y_i from the sample are used with a weight w_i in the estimation.

$$\hat{Y}_{\Sigma} = \sum_{i=1}^n w_i y_i = w_1 y_1 + w_2 y_2 + \dots + w_i y_i + \dots + w_n y_n$$

The individual w_i for each sampled element are determined using information from auxiliary variables. Auxiliary variables can be observed in the sample (x_i) and have (for example) a known population total. For an auxiliary variable X , the w_i must fulfil the restriction

$$X_{\Sigma} = \sum_{i=1}^n w_i x_i = w_1 x_1 + w_2 x_2 + \dots + w_i x_i + \dots + w_n x_n$$

In our example, the auxiliary variable could be a dummy variable = 1 for organic farms, and X_{Σ} would be the number of organic farms in the population.

¹ Sampling probabilities are well defined in situations with stratified random sampling. Nevertheless, the same aspects must also be taken into account in (the common) cases of non-random sampling.

In addition to the restrictions for the auxiliary variable, a distance function D between the w_i and a starting value w_{0i} is to be minimised.

$$\sum_{i=1}^n D(w_i; w_{0i}) = \min!$$

The starting values w_{0i} can be design weights, post-stratification weights or a constant such as 1.

The w_i determined by the calibration model are used to weight the observed study variables y_i in the sample (see first formula above). The result is the estimate of the population total Y_{Σ} .

Of course, more than one auxiliary variable can be used simultaneously in this approach. It is reassuring that a calibration using the number of farms by farm type, farm size classes and region as the auxiliary variables (dummy variables) produces exactly the same weights as the common post-stratification procedure. A major difference is that it is easier to include more auxiliary information and also different types like discrete or continuous variables (e.g. the sum of laying hens in organic farms in a specific region).

An application of calibration to Swiss FADN data

With the aim of identifying major sources and the quantitative relevance of bias in the estimates of the Swiss Farm Accountancy Data Network, calibration has been applied in five different models. The first model 'Basis' corresponds to the current system with post-stratification and in the last model, the number of organic farms is included and adjusted to the population totals at regional level (Table 1).

Table 1. Five different calibration models

Basis	Equivalent to the current post-stratification by farm type, farm size and region
Land	As above, plus calibration of 7 elements of land use: (wine, fruits, vegetable crops, sugar beet, potatoes)
Land_age	As above, plus calibration of the number of farms in six age classes
Land_age_education	As above, plus calibration of the number of farms in 3 classes of education levels
Land_age_education_organic	As above, plus calibration of the number of organic farms in 3 regions

As Figure 1 shows, the calibration of the seven land use elements and the additional adjustment for the age structure has little influence on the estimated average income. If education is considered too, a reduction of 3 percent can be observed, whereas the calibration of the number of organic farms has only a minor effect on estimated income.

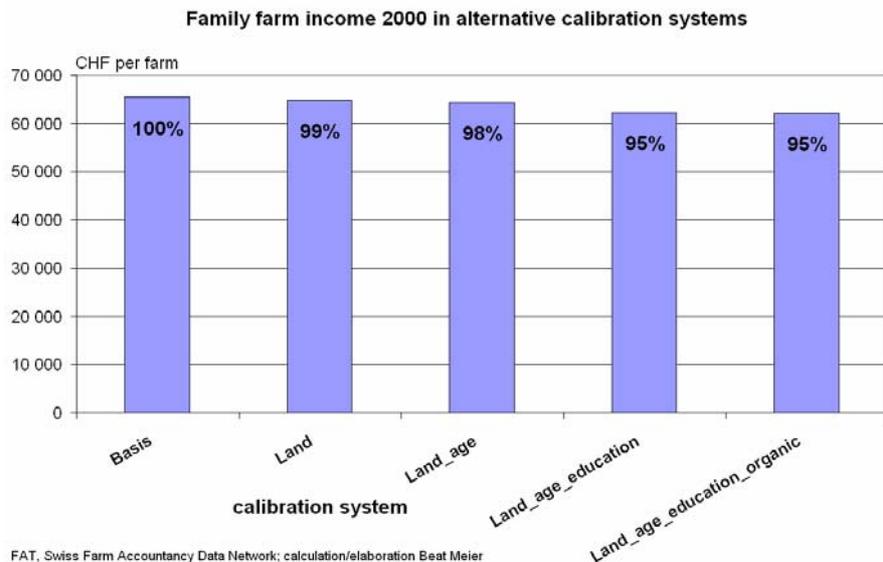


Figure 1. Influence of alternative calibration systems on average income

If the study variable is direct payments for organic farming rather than income, we observe for the year 2000 an overestimation of 40 percent in the current standard results. The reason for this is that the over-representation of organic farms is not adjusted with the current post-stratification criteria farm type, farm size and region. A calibration of several auxiliary variables including the number of organic farms (model 'Land_age_education_organic' above) almost eliminates this bias, as illustrated in Figure 2. Of course, other variables, like fertiliser cost, which are correlated with the characteristic 'organic/non-organic' would also benefit from a calibration of the number of organic farms. The variance in the estimates must be borne in mind in order to avoid replacing a relatively moderate bias with an excessive variance.

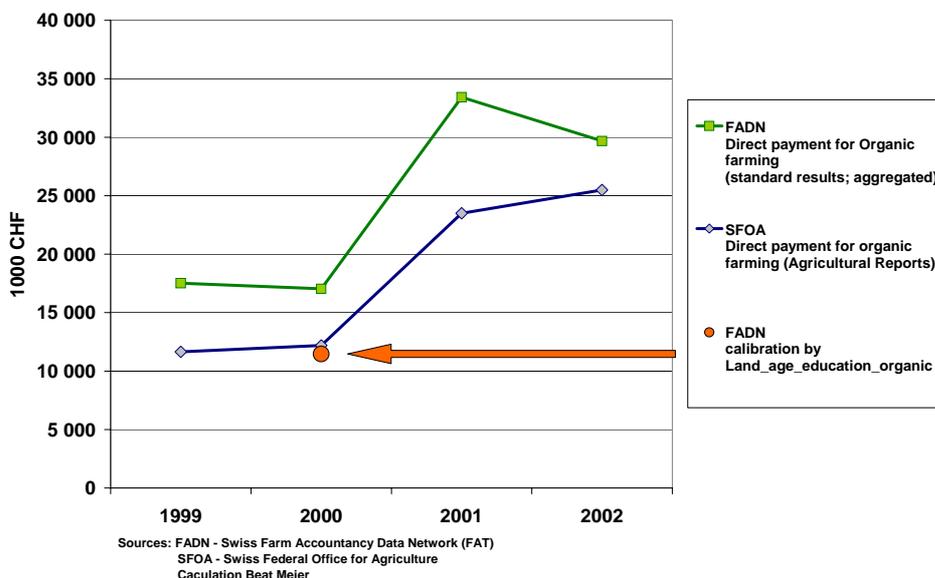


Figure 2. Bias of direct payments for organic farming and the effect of calibration

Conclusions

To address issues of representativity in FADN based analysis of organic farming, selection plans and their implementation play an important role. Their improvement however can not be realised immediately.

In contrast, weighting methods provide instant solutions to problems with existing data. They not only take the intentional differences of selection probabilities into account but can also adjust for different types of errors occurring during sample selection and data collection. As an alternative to traditional post-stratification, calibration is a more general approach that offers more flexibility as far as the number and diversity of auxiliary variables are concerned. One potentially negative point is that calibration is not as easy to understand as a post-stratification weight. This might be a weak argument in specific and scientific analysis, but it must be carefully discussed before including calibration as an element in the calculation of FADN standard results.

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Sampling of Organic Farms in the Dutch FADN: Lessons Learned

Hans C.J. Vrolijk¹

Introduction and problem statement

With the increased interest in organic farming, reliable data on the extent and performance of organic farming becomes more and more essential. FSS and FADN are often considered to be good sources of data on the scale of organic farming and the financial economic situation of individual organic farms (Duchateau, 2004; Wolfert, 2004). The fact that organic farming is not considered as a stratification variable in the EU FADN system, results in inconsistent and sometimes erroneous use of organic sample data. In this paper the history and use of data on organic farms in the Dutch FADN is described.

History of organic farms in the Dutch FADN

Since the early nineties organic farms have been included in the Dutch FADN. The farms were included in the FADN for specific research projects aimed at analysing the economic performance of organic farms. In 1997 a start was made to systematically collect information on organic farms (Bouwman et al., 1998) and an additional sample of 45 organic farms was drawn. The special treatment of organic farms was partly caused by the lack of a sampling frame for organic farms. In the normal sampling procedure the agricultural census is used as the sampling frame (Vrolijk, 2002) and until 2000 there was no information on organic farming in the census. Information from SKAL was used to identify organic farms (SKAL is the inspection body for organic production in the Netherlands). This resulted in some practical problems due to the use of two sampling frames. A systematic sample was drawn from each stratum of organic farms.

In 2001, the sampling strategy was reconsidered (Vrolijk and Lodder, 2002). Organic farming was fully integrated into the design principles of the Dutch FADN and separate strata were introduced for organic farms. In general, there are two major reasons for the inclusion of (sub) strata: (1) statistical reasons - to increase the sampling efficiency and (2) reporting reasons - to ensure the availability of a minimum number of observations for a group of interest. In the decision to include separate strata for organic farming the second reason prevailed. A distinction between organic and non-organic for all types of farming was not achievable because the number of strata would double and the problem of empty or near-empty cells would increase dramatically. Therefore a selection was made of a number of types of farming with a substantial amount of organic farms. Organic farming, as a separate stratum, was introduced for

- dairy farming
- arable farming
- vegetables in the open air
- mixed crop farming

In the other strata, organic farms have the same inclusion probabilities as the non-organic farms. From the beginning there was an awareness that the inclusion of separate strata for organic farming would

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result in inconsistencies with the weighting procedures at the European level. National weights of farms within one EU strata will diverge strongly (unless similar sampling rates are used, but given the number of organic farms it is more logical to apply higher sampling rates). This problem will be further illustrated in the next section. However, the policy and research relevance of organic farming was considered to outweigh these problems.

Statistical aspects of the use of data from organic farms

From a statistical point of view, there should be a direct relationship between the sample design and the statistical treatment of the data. The specific nature (in statistical terms) of organic farms in the FADN sample makes it necessary to consider this relationship. When separate strata are included for organic farms, the analysis is fairly straightforward by using stratified estimators for the mean and variance estimations. If organic farming is a subgroup of a stratum, estimating the variance in particular becomes more complicated (using post-stratification (section 5A.9; Cochran, 1977) or estimating totals and means over subpopulations (section 5A.14; Cochran, 1977)). In both cases, the variance will be higher.

a) Representation of organic farming

In principle, weights should reflect the inclusion probabilities of individual elements as reflected in the sampling scheme or sampling frame. Treating organic farming as separate strata and using this information in making estimates fully respects this principal. Problems arise due to the inconsistency between the National and EU weighting procedure. The EU procedure does not include organic farming as a separate stratum and therefore joins elements from different strata without considering the individual inclusion probabilities. The inconsistencies can be illustrated as follows.

In several Commission publications extreme deviations between FADN and FSS are described. This leads to their conclusion that the Dutch FADN misrepresents organic farming (D'Avino, 2004). The real reason can be found in the inconsistency of the weighting procedure. In the Netherlands the organic farms get a specific weight to represent only the organic farms. Due to the higher sampling rate in the strata for organic farming these weights are lower than the weights of similar non-organic farms. Ignoring this difference will result in a slightly lower weighting for the non-organic farms and a substantially higher weighting for the organic farms. This substantial higher weight for organic farms leads to the erroneous conclusion that organic farming is misrepresented. The foregoing is illustrated in Figure 1. In the population of 22'280 dairy farms there are 361 organic farms. Organic farms are covered by separate strata from which farms are selected with a higher inclusion probability. If the farms are weighted by the same strata, the sum of the weights is identical to the number of organic farms in the population. In the EU weighting scheme the distinction is not made and organic farms get a much higher weight, resulting in a sum of weights (1963) which is much higher than the actual number of organic farms, and thus to the conclusion that organic farming is misrepresented.

Table 1: Misrepresentation of organic farming due to inconsistency in weights

Size Class	Population			Sample		National weights		EU weights	Sum of weights
	Dairy	Organic dairy	Total	Dairy	Organic dairy	Dairy	Organic dairy		organic
Small	8070	159	8229	103	10	78.3	15.9	72.8	728.2
Middle	10459	129	10588	104	10	100.6	12.9	92.9	928.8
Large	3390	73	3463	103	10	32.9	7.3	30.6	306.5
Total	21919	361	22280	310	30				1963.5

The conclusion from above is that if countries use additional criteria in their stratification, ignoring these criteria will result in serious biases in the weights and therefore in the calculated results. Several solutions exist. The first is strict harmonisation of strata, but this might be in conflict with national interests. Another solution is the use of national weights to be provided by the Liaison Agency: this requires clear guidelines for Member States in order not to compromise on the comparability between them. Post-stratification only provides a partial solution, because post-stratification on a stratified sample still requires information on the original inclusion probabilities. In specific research projects small area estimation (Dol, 1991) or calibration techniques (Meier, 2005) can be useful. The essence of these methods is that additional information on organic farming is used in the estimation process in order to increase the quality of the estimates.

b) Estimating results of organic farming

In general the number of observations of organic farms is limited for a specific type of farming. Given the limited number of observations it is crucial to consider the statistical reliability of estimates.

The reliability of estimates is especially important in comparing the performance of organic farms with the performance of non-organic farms. Neglecting the reliability of the estimates for (especially) organic farms can easily lead to conclusions which cannot be supported by the data. Due to the limited number of observations and the special nature of organic farms it is also questionable whether the results of organic farms can be compared to the results of the complete set of non-organic farms. Some researchers prefer to select non-organic farms with similar structural characteristics. Selecting these characteristics and defining a distance measure (how similar is a non-organic farm to an organic farm) becomes a crucial phase in the research process. Offerman (2004) gives some useful considerations. A tool like STARS (Vrolijk et al., 2005) which offers the opportunity to select similar farms, provides flexibility in choosing characteristics and evaluating the consequences of this choice.

c) Estimating the number of units in the population

The statistical reliability should be considered not only in estimating results such as the average income but also in estimating the number of units in the population. The sum of the weights of farms with a certain characteristic in the sample is often used as the indicator of the number of farms in the population with that characteristic. The sum of the weights might be an unbiased estimate of the number of units in the population, however, this estimate has a wide confidence interval (in case of organic – non organic it is a binomial distribution).

Assume a population of 5000 units and a sample of 100. In case of nine organic farms it is too easy to say that these farms 'represent' 450 organic farms (sum of the weights: nine times the weight of a single farm ($5000/100 = 50$)). Considering the binomial confidence limits, the limits for P are found to be 0.041 and

0.165 (Cochran, 1977). Based on these confidence limits, the limits of the confidence interval of the actual number of organic farms in the population are 205 and 825 (95 percent confidence interval).

Summary and conclusions

With the increasing interest in organic farming, the information available is used as much as possible. Given the EU stratification scheme it is, however, important to be aware of the limitations and possibilities. The use of the data should be in line with the sample design or alternative estimation techniques should be used to correct for deviations. In particular, the use of a different stratification at national and EU level can result in serious distortions. Several solutions exist to overcome these problems. Organic farming as a subgroup, with often a limited number of observations, requires special attention in the estimation of means and especially of variances.

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The Ministry Perspective of FADN

Rainer Meyer¹

The EU FADN in Germany

Under national legislation the German Federal Government has to submit a report to the German Bundestag and the German Bundesrat annually on 15 February about the situation of agriculture in Germany. For some years organic farms and processors have been presented separately in that report.

The agricultural accountancy results (TBN) of the test farm network of the Federal Ministry of Consumer Protection, Nutrition and Agriculture (BMVEL) are published every year in the Agricultural Report² of the German Government and run to approximately 20 pages. One page describes the situation of organic farms and covers the number and area of the organic farms, the profit and loss account of selected organic farms as well as their income and a comparison with similar and conventional farms. In the appendix, of book-keeping results more details on their economic situation are provided, especially results within Germany.

These data are also published by 15 February in the Agricultural Politics Report for the German Bundestag and the German Bundesrat and are used to prepare political actions. on the Ministry homepage. Many farm results from FADN are published annual in the Statistical Yearbook of Agriculture in Germany. The results are both necessary and helpful in:

- Forecasting the income of agricultural farms in the actual accounting year
- Calculating data for Federal Ministry of Finance (Ref. IV B9, Einheitsbewertung, § 13 a Einkommenssteuergesetz (EstG, u. a.),
- Calculating of Sozialgesetzgebung of agriculture for Federal Ministry of Labour (u.a. § 32 Abs. 6 ALG),
- Calculating figures for European Forestry Accountancy (FGR),
- Calculating figures for parts of the Agricultural Sector (LGR),
- Modelling and analysing for the Federal Research Institute (FAL),
- Calculating economic data for several purposes (KTBL),
- Answering questions from the federal and the Länder parliaments, scientists, academics and others. Each year the FM of Agriculture responds to about 100 special enquiries concerning current political questions (not presented in the annual national Agricultural Report).
- Analysing planned agri-political measures (CAP, market organisation sugar, beef)
- Use of INLB data in research: the individual data are made available to the Institute of Farm Economics in the Federal Agricultural Research Centre (FAL), for modelling analyses on behalf of the FM CFA, and also to universities for special questions, e.g. half-time evaluation of economic subsidies from EU, Germany and the Länder.

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The views expressed are those of the author and do not necessarily reflect the views of BMVEL.

² Now: Nutritional and Agricultural Politics Report

EU FADN results for Germany – some problems

- In the EU FADN farm return there is no differentiation (neither in the presentation of the results nor in the weighting) of the German holdings according to the **legal form (Juristische Personen)**. The legal entities are classified according to the economic size class XL (more than 100 ESU).
- Also some **income indicators** used in the EU FADN are problematic from the German point of view. The large and increasing importance of other legal forms which are not linked to a single family makes the use of indicators like 'Family farm income/Family Worker Unit' (FWU) questionable. This is particularly the case if averages for different legal forms (using unpaid and paid labour) are calculated.

Some problems in carrying out the FADN:

- For the reasons given above, the EU FADN standard results for Germany in the current form are usable only to a very limited degree, especially when there are questions concerning some or all of the Member States.
- In the **new applicant countries** there are similar legal forms of agriculture. One year ago the increasing importance of co-operative forms of business organisation in France was demonstrated.
- The desire not to limit the adjustment of the EU network to the technical modernisation only might, therefore, not be only a German problem.

The approximately 16'500 organic farms in Germany in 2005 are represented by 295 test farms in the national TBN. Of the total, 1.8 percent or 220 farms are the same as in the previous year. There is a demand for a larger number of test farms from the Länder and from the federal government. Unfortunately there is no grouping for regions or states as yet because of the small number of farms; we are trying to increase the number. The quality of data is checked by several types of plausibility test. Within the FADN there are also some special tests.

There is now a sufficient number of organic farms to differentiate between three types: tillage, forage growing and mixed farming can be compared with their conventional comparison groups. The agricultural accountancy systems have been in existence for many years but are continuously improved. The farm systems are adopted from the EU and the whole test farm net of Germany is compatible with the INLB. Training for the farms assures a high quality level.

Strict quality control in the selection of farms and training, as well as staff continuing to work in all spheres (farms, accountancy, states, personnel) ensure continuity and quality of data and results. Data are publicly available and are open for professional and political discussion. All areas of the TBN, professional and political, are compatible with the FADN.

The TBN and the FADN can be used as a model for organic farms in other countries. Experts provide information about it in the EU-pre-accession countries and meet regularly in Germany to improve the system.

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The FADN and the Analysis of Organic Farming: the Italian Perspective

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The Italian FADN in the context of the information needs of organic agriculture

The importance of the organic sector in Italian agriculture largely justifies the effort that the stakeholders are making in trying to obtain reliable harmonised data for the sector. In Italy, the need for accurate information on the organic sector is also widely recognised at the institutional level. In fact, the Italian Ministry of Agriculture has recently approved a project whose aim is to set up a National Observatory on Organic Agriculture. The purpose of the Observatory is to create an updated and comprehensive information tool for public institutions, producers and final consumers. The Italian FADN liaison agency (INEA), along with the National Statistical Office (ISTAT), the Mediterranean Agronomic Institute (IAM-B) and the Institute of Services for Agriculture and Food Market (ISMEA), is involved in the Observatory. In particular, the role of INEA is to contribute the Italian organic farm financial data available in the Italian FADN (RICA) in which organic farms are included without any special strata in the selection plan.

Table: Number of farms identified in the Italian FADN, according to the identifier variable applied in Italy from 2001⁴.

	2001	2002	2003
Partially organic-converting	92	88	65
Partially organic-partly converted, partly converting	91	76	36
Partially organic-converted	540	671	353
Fully organic, converting	45	48	35
Fully organic-partly converted, partly converting	48	43	17
Fully organic-converted	375	361	280
Total	1.191	1.287	786
% of total RICA sample	7%	7%	5%

The percentage of organic holdings in the total RICA sample is pretty constant in the three years; the drop in 2003 reflects the change in the RICA sampling from a voluntary basis to a random one. With the voluntary sample, in fact, many regions over-sampled organic holdings in their regional sample, and the introduction of a random sample means that this is no longer possible.

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4 Before 2001 data on organic farming could be deduced indirectly from organic subsidies.

If the need for accurate information on organic agriculture is recognised widely and specifically, problems arise when moving on to possible solutions and proposals for how to satisfy the need. Among the problematic areas and barriers identified in the proposals on the implementation of the EISfOM results, this paper considers the issues of comparison and sampling.

Comparisons with conventional farming

The comparison of organic versus conventional farming is complex and it does not seem easy to identify a single approach. For each theoretical and methodological approach, different tools are useful. The rich scientific debate and abundant research output provide evidence of this difficulty.

Any comparison of organic and conventional farming means that two completely different production systems are being compared. The conventional production system is highly dependent on external production factors, while the organic production system is, in principle, a closed system since it aims to preserve and renew the fertility of the soil without using chemical inputs.

When the comparative analysis is limited to economic aspects and does not consider the external aspects linked to organic farming, the comparison between organic and conventional management and economic results can be made using a spatial or a temporal perspective. Both approaches can be adopted when using RICA data. Organic agriculture can be considered a long term innovation and the balance sheet, covering at least one cycle, is therefore the most adequate tool to measure the economic results.

The Italian experience of using RICA data for comparison most commonly adopts the spatial approach. It considers differences and analogies in the economic results of similar holdings, where the similarity is expressed in structural terms (UAA, capital, livestock units etc.). In this way the structural and managerial adjustments that follow conversion to organic production are not taken into account and the economic analysis is limited to the situation after conversion. This type of comparison offers some practical advantages but is not sufficient to evaluate the process of organic conversion for the farmers.

The temporal approach allows the investigation of several structural modifications which take place during the conversion period and consists of two steps: the first step examines the situation at a specific time for certain organic and conventional holdings with similar managerial and structural characteristics (economic dimension, localizations, type of farming etc.); the second analyses the economic results and the structural aspects of the same holdings after a certain period of time. The comparison between farms with equal organic conversion potential allows evaluation of whether the organic converted farms show comparative advantages against the farms that have kept conventional production systems.

Moreover it is possible to examine the modifications that have occurred within the converted farms in terms of the type of farming or of farm resource management (labour, land etc.) as a consequence of the adoption of organic production systems.

The analysis of productivity and of factors of production can be carried out using the RICA data. With RICA it is also possible to analyse, in terms of efficiency and productivity, the production processes and it is possible to simulate the response of the production structure in both conventional and organic farming to variations of prices and/or subsidies.

The RICA collects much useful information for analysis of environmental pressure factors such as the application of environmental commitments and production methods adopted. For organic production, very detailed information relating to subsidies is collected: the amount of subsidy, the source (EU, national, regional level), the type of subsidy, the object (crop or cattle).

Nevertheless, alongside the advantages offered by the RICA system in the comparative analysis of conventional and organic farming, there are also some limits and gaps in the system. The lack of quantitative measurements of inputs (fertilisers, plant protection products, seeds, labour time, machinery time) used in each production process forces the data user to integrate RICA with ad hoc surveys in order to achieve a complete analysis. Information is not available on the number of years since the adoption of organic methods (for farming converted to organic before 2001).

Sampling

Before considering the two main aspects of sampling, representativity and size, we need to clarify what it is we wish to analyse with the farm financial data.

If the main goal is to get an instrument for analysis of the organic agricultural sector, it should be kept in mind that this was not and is not FADN's main purpose and, as mentioned above, in the specific case of Italian FADN, organic variables are not taken into account in the selection process, therefore the actual FADN sampling design is not perfect. The discussion therefore should be directed towards development/adaptation of the available instrument (FADN) to a sort of second best solution without aiming for statistical representation; it is also unrealistic to look for statistical representativity at regional or farm type level.

A first best solution implies the implementation, alongside the current FADN, of a new '*organic FADN*' sample, which has obvious financial barriers.

In the context of a new hypothetical '*organic FADN*' for the specific case of Italy, it would be a matter of some urgency to obtain reliable official statistical data on the universe of organic farms in a format which would allow for FADN classification by economic size and type of farming. The main purpose of the National Observatory is, in fact, to collect these data from the certification bodies in a format that allows also the application of FADN classification (type of farming and farm size) and stratification according to the census grid. Only after the identification of the organic universe can the problem of representation be addressed.

On the other hand, if the main goal is the analysis of income from organic farming in the framework of evaluation of EU organic policy, FADN is the best source of information.

If we want to frame the need for financial data in the context of policy analysis, the problem of small organic samples arises. A proposal to increase the number of organic holdings surveyed in FADN can be based on the idea of satellite samples.

In 2002 INEA set up a project to use the accounting sample as a tool for the regional public administrative bodies to manage agricultural policy measures. The initiative is linked to the programming period 2000-2006 and in particular to the valuation (ex ante, intermediate and ex post) and monitoring activities. The project is based on the idea of a satellite sampling design composed of several samples linked to each other. Methodologically this allows each indicator to be measured for a group of holdings involved in a single intervention (e.g. organic agriculture) and to compare such measures with the counterfactual situation. The counterfactual situation is deduced from representative samples belonging to the FADN regional sample. The regional FADN sample therefore acts as the planet around which the satellite samples (included the organic one) gravitate. The satellite samples are smaller and are composed from the regional holdings that join the agricultural policy scheme. The link between the planet and the satellite samples is guaranteed by the FADN variables necessary for typology classification. Satellite samples have already been adopted in Italy but so far not for the analysis of organic agri-policy.

The organic satellite sample represents the units benefiting from the specific organic measure, since it is extracted from the regional administrative archive; on these units the FADN variables are collected with the same methodology used for the national RICA sample.

Critical points in this proposal are:

- limiting the sampling scheme to holdings which benefit from subsidies; organic farms without subsidies are excluded since they are not part of the regional archives.
- regional administrations also have to be involved financially to implement the satellite sample scheme.

Conclusions for discussion

At the European level FADN is the only harmonised source that includes technical, financial and economic data on farming. It is not the official statistical source of information on financial/economic aspects of organic agriculture, nevertheless it has been widely used in several national and international studies.

The diffuse use of FADN for analysis of organic agriculture has demonstrated the advantages and disadvantages of such a database and modifications/adaptations of the actual FADN in order to accomplish organic needs are costly both in financial and management terms.

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Berater-Praxis-Netzwerk (BPN) – the Consultant-Producer-Network

Rainer Löser¹

Aims of the German Consultant-Producer-Network²

The aims of the network can be summarised as:

- Creation of a Germany-wide network of consultants to prepare a solid base of financial data for important organic production activities and the whole farm.
- Creation of nationwide working groups of specialised consultants and farmers for the milk, pig and poultry production sectors and farm comparisons.
- Organisation and execution of training seminars for the specialised consultants twice a year
- Preparation of on-going reliable financial and physical data for important farm production sectors and the whole farm
- Improvement of the financial performance of the different production sectors or of the whole farm through intensive consultancy
- Development of an integrated system for the analysis of the whole farm or production sectors (Agricon farm comparison, full cost analysis of production sectors using the DLG method)
- Networking of farmers, consultants and scientists
- Dissemination of specific information via the German BIOS database for farmers' organisations and consultants or other knowledge databases and media
- Use of the financial tools also after the end of the project

Methodology

The whole project was developed out of the experiences of the Status Quo Study of Organic Pig Production (BLE-Geschäftsstelle, 2004), where a Germany-wide group of consultants worked on a production sector evaluation of organic pig producers with a new Excel spreadsheet tool. The proposal to extend the successful activities to other production sectors and to train specialist consultants from different and sometimes competitive companies in the use of a management tool to identify weak points in that sector (and give advice to solve the problems!) was accepted by the BLE in Germany. For the whole farm comparison, the 'Agricon' tool is used to prepare a horizontal and vertical farm comparison of around 200 German farms. Six consultants are involved over a period of two years and they produce farm comparisons for the years 2002/2003, 2003/2004 and 2004/2005. The specific framework of parameters and their definition comes from the 'Stuttgarter Kennzahlen'. Classification of the farms will be carried out according to the new EU classification system, beginning with the comparison of the year 2003/2004.

The production sector evaluation working groups (**Poultry Husbandry**: ten consultants, 32 laying hens farms, five farms with young hens, six farms with chickens, five farms with turkeys, **Milk Production**:

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² Term of project: May 2004 to March 2007, Project 03OE495 of the Bundesprogramm Ökologischer Landbau, Sponsor: BLE, Bonn, Germany.

seven consultants, 46 farms, **Piglet and Fattening Pig Production:** 12 consultants, 20 piglet producers, 26 farms with fattening pigs) will work out the full cost analysis for the years 2004/2005 and 2005/2006 using a specially developed Excel spreadsheet tool as free shareware. The standard for the full cost analysis is derived from the German DLG Standard, which is also used in conventional farms, and the compulsory record books in the production sectors. The definition of the parameters is therefore the same as for the conventional sectors.

The farmers pay an annual fee of 100 to 200 € per farm or production sector. The consultants contribute their time by participating in four seminars without compensation for travel or office costs. Total project costs for the whole period are about 735'000 € and 80 percent is funded by the BLE, Bonn, Germany.

Results

The results of the farm comparisons for 2002/2003 are published as a report (Jorek, 2005a) and as a short presentation in Bioland (Jorek, 2005b). The results for the following years will be published by mid 2006.

Table 1: Farm comparison 2002/2003, 164 farmers in Germany

Parameter	Unit	All farms 164 farms	Crops intensive 48 f.	Crops extensive 30 f.	Diary cows 50 f.	Suckler cows 36 f.
Labour units	Persons/100 ha	2.1	2.2	1.7	2	1.9
Total labour unit	Persons	1.9	2.5	1.5	2.2	1.7
Farm size total	Ha	90.08	113.24	88.11	108.4	94.11
Arable land	Ha	61.61	94.47	67.31	58.81	44.74
Cereals	Ha	30.56	41.67	42.03	25.2	24.54
Potatoes	Ha	5.64	17.05	0.23	4.75	3.34
Grassland	Ha	25.76	17.23	16.06	44.41	45.51
Rent	%	66.8	74.9	44.2	73.5	70.6
Stocking rate	LU/ 100 ha	58.4	29.1	29.3	86.3	89.4
Dairy cows	Head	17	----	----	54.2	-----
Suckler cows	Head	8	----	-----	-----	32
Cereal yields	dt/ha	29.51	29.38	26.32	32.57	29.94
Potato yields	dt/ha	135.4	144.27	109.17	150.76	136.01
Milk yields	kg/milking cow	6050	----	-----	6050	-----
Total returns	€/ha	2173	2492	1381	2328	1682
Total costs	€/ha	1793	2072	1187	1896	1391
Paid work, machinery rent	€/ha	126	141	89	139	92
Machinery depreciation	€/ha	163	209	102	177	161
Fixed costs inc. rent, rates and interests	€/ha	802	974	545	839	655
Profit	€	29'200	41'807	15'701	36,'20	23'496
Outgoings	€	17'787	64'851	48'457	51'282	15'684
Profit	€/ha	324	369	178	339	250
Profit rate	%	15.4	15	14.8	15.3	14.7
Change in farmer's net equity	€	-2'000	-9'643	-208	-4675	-1633
Net investments	€	115	170	25	48	179

The results of the production sector evaluations will be discussed in the (closed) working groups in November and December 2005 and, in part, in the International Conferences of the milk, pig and poultry production sectors which take place in February and March 2006.

We are optimistic that after the project ends the consultants will still work together using the tools and will prepare the farm comparisons and branch evaluations in closed workshops. Although the consultants are from different organisations (independent and state consultancy services as well as consultants from farmer organisations), they gather at their seminars and international conferences each year without any direct subsidies.

Possibilities for cooperation between EISfOM activities and the BPN

Some of the problems raised in the EISfOM draft recommendations, such as recruitment and identification of holdings, could be solved through increased interaction with consultants who know and have direct access to farmers. However, groups formed with the assistance of consultants may still not achieve statistical representativity, as the producers tend to be self-selecting. There will also be turnover of membership so identical samples cannot be maintained for significant periods of time. Participation needs to be on the basis that there is some benefit, at least in terms of information gained, to the producers involved – they will not remain in the process otherwise. The commitment of producers to the process is strengthened if there is some direct financial contribution from them to the costs of the service, as is required in this project, but in return they are assured of concrete outputs (including advice) and confidentiality with respect to their individual data.

In this project, the consultants have access to very detailed financial and physical data from organic farms in Germany, in some cases with ten percent of the production of the whole sector. They are assigned to help the farmers to develop their farms. These individual data are not for public use. Farm comparisons will be published selectively and the results for the farm production sector will only be published on a limited basis, for obvious commercial confidentiality reasons. Data for types of farm production sectors which are common (as clusters) in Germany could be published with yearly actual business data (Redelberger, 2004). The publication could be presented as a ‘Yearbook of organic agriculture in Europe’ similar to the ZMP-Ökomarkt-Jahrbuch.

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The Use of a Benchmark Tool Based on FADN for the Management of Organic Dairy Farms

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Aims

The aim of the Bioveem (Management of Organic Dairy Farming) project was formulated as: 'Dairy-farmers, researchers and advisors will combine their specific knowledge, visions, views and skills. Together they will deliver a unique contribution to strengthening the development and expansion of organic dairy farming in the Netherlands'. The project is based on a bottom-up approach and the participating farmers play an important role (Baars, 2002). One of the themes within the project was farm economics, and within this, a flexible farm comparison tool called Face-IT was used to compare individual technical and financial farm results with the results of a group of farms selected using flexible criteria. There were two main aims in using this tool:

- to mirror farm results in order to support the farmer in analysing strengths and weaknesses;
- to compare the results for individual organic dairy farmers with conventional dairy farmers.

Methodology

This section describes two aspects of the methodology used, firstly the bottom-up approach of the Bioveem project and secondly the Face-IT tool.

The Bioveem project.

Bioveem was an interdisciplinary collaboration between several institutions: Animal Science Group (ASG-WUR), Louis Bolk Institute (LBI), Extension Service DLV and Agricultural Economics Research Institute (LEI WUR). LBI describes the method as participatory action research and experiential learning of pioneer farmers. The participating farms were not selected as statistically representative of the total group of organic farms. On the contrary, the aim was to have a large variety of farming systems so that each farm could be considered as an individual experimental station and the group of farms together acts as a 'garden' for the development of future organic farming (Baars, 2002). In the project this method was combined with an Interactive Strategic Management approach. In this approach the farmer is considered to be the pivot in the strategic development of his farm. The farmer analyses the current situation (in terms of personal competences, internal factors and external factors). The farmer combines this analysis with his own ambitions and goals to formulate his strategy. Advisors and researchers have a facilitating role (Smit, 2002). Recent research shows that a strategic management approach is a successful method of strengthening the locus of control for dairy farmers and of improving their entrepreneurial competencies (Bergevoet, 2005).

The project began with the farmers formulating their personal goals and farm strategy with help of the Strategic Management Report (Elzen, 2003). Within the farm economics theme the technical and financial results of the participating farmers were discussed.

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Methodological background of Face-IT¹

The objective of Face-IT is to find a group of farms R^o that match the farm of interest (x) as closely as possible, based on the selected attributes (A^s) given by the user. Not only should (1) an individual farm $r \in R^o$ have a good match with x , but (2) the average value of each attribute $a \in A^s$ of all farms in R^o must also resemble the comparable attributes of x 'as closely as possible'.

Pre-selection

Let R be the collection of records (i.e. farms) in a database, and A be the set of (numerical or categorical) attributes $a_1 \dots a_j$. Each individual $r \in R$ will be compared with x ($x \in R \wedge x \neq r$) based on a sub-set of chosen attributes $A^s \subseteq A^p \subseteq A$, where $a_i \in A^s$ and $i \geq 2$. Only an attribute from the set of potential attributes A^p is eligible for selection, because for some attributes in the set A , selection by a user might not be allowed. If such attributes exist, they are merely used for comparison purposes.

After each individual record $r \in R$ is compared or matched by means of a fitness function (see below), these records are sorted based on the outcome. After sorting, the set R will become R^s . Only $R^p \subset R^s \equiv R$, or the best matching records, will be used later. The number of records in R^p , i.e. $|R^p|$, is calculated as $|R^p| = \lambda * |R^s|$. The pre-selection pressure λ should be small enough to guarantee that all members of R^p resemble our farm x to an acceptable level. For a proper use of Face-IT, $|R|$ should be large (at least a few hundred records) and λ not more than ten percent (depending on the data). Very large databases provide opportunities for a large $|A^s|$ and a very small λ , and, as a result, a very good set R^p .

Genetic Algorithm

With pre-selection it is assured that each individual farm $r \in R^p$ has a good match with x . Now we want to ensure that the average value of each attribute $a_i \in A^s$ of all farms in $R^o \subset R^p$ resembles the comparable attributes of x 'as closely as possible'. Genetic algorithm, a method inspired by population genetics, is applied to find the 'optimal' set R^o . The number of records in R^o , i.e. $|R^o|$, can be changed by the user².

First a random population of individuals is generated, each having a distinct set of genes (i.e. records) on a chromosome (i.e. group of ten records or farms). A new generation is produced by the Darwinian principle of natural selection or the survival of the fittest. Parents, or individuals with the best evaluation of the fitness function, are randomly allowed to produce offspring by using the operations *crossover* (swapping of genes from the parent's chromosomes) and *mutation* (replacing a gene with a new one). Better parents may produce more offspring. After a new generation is produced, new parents are selected for the next generation, and so on until the best solution ceases to improve.

Optimisation algorithms, and therefore also genetic algorithms, try to find the optimum within a billion or more combinations. They do not guarantee that the best solution will be found, although a solution might be good enough for practical use. To solve in part the problem of 'stuck in local minima', Face-IT starts a number of different runs (e.g. 10 or 20) each with a different population at the outset. The best outcome from all runs will be considered as the (sub)optimal solution: R^o . If more runs result in the same best solution, R^o may even be considered optimal.

Fitness function

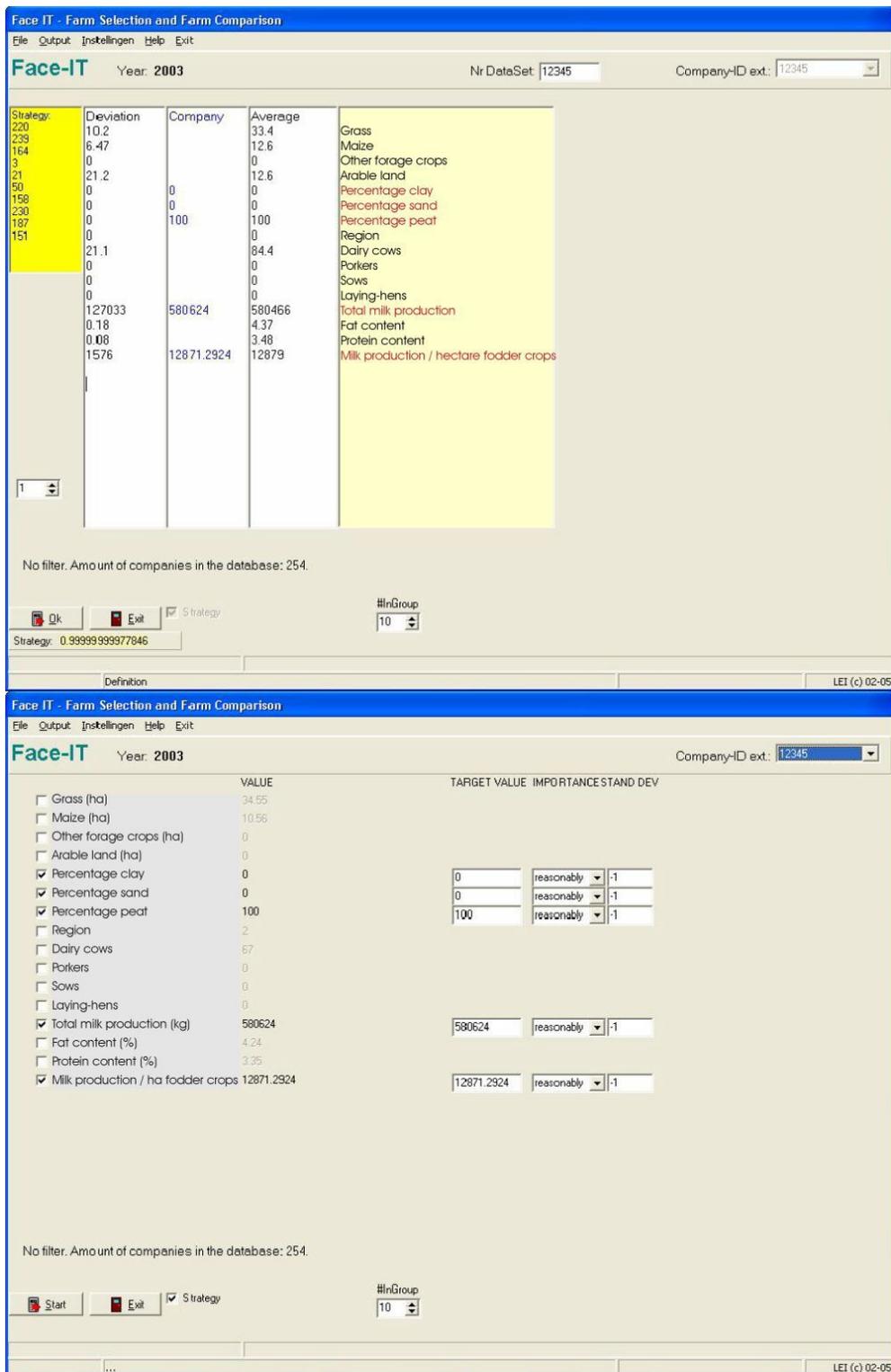
For matching, a fitness (or evaluation) function will be applied. This function is based on the Euclidian distances of the values of $a_i \in A^s$. The deviation between r and x for a_i is normalised by a pre-defined

1 Farm Accounts Compared by Evolutional Improving to Top-combination

2 FaceIT has also the opportunity to automatically find the most feasible number of records between 2 and 20.

range. The fitness function can also account for user preferences: importance of a_i out of the set {'very important', ..., 'slightly important'}, and maximal allowable variation of the values of a_i .

Figure 1: Selection and result screen Face-IT



Application of Face-IT in Bioveem project

The Face-IT database was filled with FADN data on specialised dairy farms. For each individual Bioveem farm, Face-IT was used to create a group of comparable farms based on the attributes: region, soil type, total farm milk production and milk production per hectare. This group is called a mirror group. Because the FADN does not include enough organic dairy farms, the mirror groups were selected from conventional dairy farms. On an individual basis, therefore, a comparison was made between an organic farm and a mirror group of non-organic farms. For each farm an individual report was produced and the difference between the farm result and the mirror group was presented as a red or a green bar. The farmers were asked to prepare a short presentation based on this mirror group report for a group discussion with other project participants (Doornewaard, 2004).

Results

The first aim of using mirror groups was to support the farmer in determining strong and weak points.

	Company X	Mirror group	Difference
Output	56.29	47.43	
Variable costs	8.87	11.1	
Gross margin	47.42	36.33	
Fixed costs	62.76	49.93	
Rate of return	79	78	
Labor income	14.63	10.02	
Milk production / man	193800	244098	
Turnover / man	109000	117480	

Figure 2: Result Face-IT

Figure 2 shows a summary of the report for one of the participating farmers. The strategy for this farmer focuses on low costs (outgoings) and high revenues (receipts). This farmer does not focus on (calculated) fixed costs. This strategy is reflected in the graph: a high gross margin but also high fixed costs.

Eleven out of twelve participating farmers in the groups gave an average 4.2 points on a five point scale to support the proposition that this comparison helped them gain insight into their own farm results. One farmer concluded that this comparison did not help him to gain insight into the position of his farm results because he saw no value in a comparison with conventional farms. Most farmers said they would also prefer to have a similar comparison with other organic dairy farms. At present this is not possible because the number of organic dairy farms in the Dutch FADN is too low.

One side effect of the individual comparison of farm results for Bioveem participants was that it was also possible to make a more general comparison of the participating group with conventional dairy farms. It must be noted that this can not be considered to be a general comparison of Dutch organic dairy farms with conventional dairy farms because the participating farmers are not a random sample of the total population. Nevertheless, the comparison of the total Bioveem group with their individual mirror groups was used as input into a discussion with the participating farmers. Table 1 provides a summary of the results.

Table 1: Company structure and financial results of Bioveem participants compared with mirror groups (2001)

	Unit	Bioveem	Mirror	Difference
Total milk production	Kg	421532	421120	412
Milk production per ha fodder crops	Kg	9098	10435	-1337
Agricultural land	Ha	50.6	43.5	7.2
Output	Euro / 100 kg milk	53.01	46.37	6.64
Variable costs	Euro / 100 kg milk	11.79	12.31	-0.52
Gross margin	Euro / 100 kg milk	41.22	34.06	7.16
Fixed costs	Euro / 100 kg milk	50.78	47.17	3.61
Labour income	Euro / 100 kg milk	11.03	8.03	3.00
Cash flow	Euro / 100 kg milk	10.71	8.28	2.43

The amount of milk produced on the Bioveem farms is almost the same as the amount produced on the farms in the mirror groups. We did not succeed in getting a similarly good result for total farm area and milk production per hectare.

If we look at the financial results, then the Bioveem farms results are good. The gross margin is just over seven EUR per 100 kg milk higher, mainly as a result of a higher milk price, but if you go more into detail, also by higher cattle sales and other revenues. The variable costs are only a little higher. The fixed costs are 3.6 euro per 100 kg higher, so the end result is better financially for the Bioveem group.

However some important comments concerning this comparison were made in the discussion groups.

- Because of the criteria selected, an optimal organic dairy farm is being compared with a group of sub-optimal conventional dairy farms. The milk production per hectare on conventional farms is usually substantially higher than on the farms that were selected for the mirror groups. It would be better to make a second comparison where production per hectare is not included in the list of selection criteria. The discussion focussed partly on milk production per hectare, because this can be seen as a difference in management and not as a different in structure. The problem is, however, that if you use farm structure criteria, such as total farm milk production or milk quota in combination with total farm area, then you get almost the same result for milk production per hectare because in the Netherlands dairy farms are highly specialised (both organic and conventional).
- The comparison should be made not only for financial results but also for other aspects that are related to sustainability.

These conclusions have led to two types of follow-up:

1. a second comparison will be made of the Bioveem participants with conventional mirror groups, using the same method but based on different criteria;
2. the benchmark tool will be developed towards a triple P benchmark tool, in which not only results on farm economics will be presented but also several other human and environmental indicators (people and planet).

In relation to the EISfOM project, some final remarks can be made about the use of collected (FADN) data and comparisons between organic and conventional farms.

- Face-IT is a useful and flexible tool to exploit FADN data for farmers and for research.
- For farmers it is important that FADN data are the same as (or easily linked to) the accountancy data with which they are familiar. LEI has changed to a new accountancy standard (IAS 41) and virtually all farmers are used to different definitions.
- When comparing organic with conventional dairy farms the choice of criteria is very important. By using different sets of criteria different angles for looking at the comparison are created. The exact choice of criteria depends on the purpose of the comparison.

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Organic Farming in FADNs – Comparison Issues and Analysis

Frank Offermann¹ and Nicolas Lampkin²

Comparisons with conventional farming

Research and policy questions in the area of organic farming often are of the type: What (if any) is the difference in profits/prices/payments depending on whether a farm is managed organically or conventionally? Is the impact of a policy change on farms depending on the management system? Different approaches exist to answer these questions (Offermann & Nieberg 2000), the most common of which is to compare the data of organic farms to those of a conventional reference group. However, it is not sufficient simply to compare the average for the organic farms with the average for all farms in the FADN sample, as the composition in terms of type, size and locality may be very different. Rather, it requires the identification of suitable conventional farms and it is necessary to ensure that any data used is genuinely comparable (Lampkin 1994; Offermann & Nieberg, 2000).

What does 'comparable' mean? Generally speaking, conventional farms are comparable if they have similar production possibilities as the organic farm, in terms of both natural environment and resource endowment. There are several problems which can arise when using this approach (see Lampkin, 1994; Nieberg & Offermann, 2003), and which can have a significant influence on the results of the comparisons. E.g., the choice of variables for the selection of comparable conventional farms has to be restricted to 'non-system determined' factors, so that farms are similar in terms of production potential or resource endowment (land quality/area, farm type, region, capital infrastructure (e.g. buildings, quotas) as well as management capacities of the producer. Other inputs, including labour, need not be similar as they will reflect production intensity and how the fixed resources are used for specific activities to achieve the desired objectives. The restriction to 'non-system determined' factors often severely limits the number of indicators that can be used, especially as information on natural production conditions in farm accounts is generally sparse.

The approaches adopted for selecting comparable conventional farms in existing studies differ, both with respect to choice of selection variables as well as with respect to matching procedures applied, so that results between studies and countries cannot be easily compared. As a consequence, within the EU research project EU-CEE-OFP (www.irs.aber.ac.uk/EUCEEOFPI/index.html), guidelines for harmonisation of income comparisons of organic and conventional farms have been developed, which can serve as a basis for a 'code of good practice' (Offermann, 2004). The preferred approach is to select a group of similar conventional farms to compare with each individual organic farm, so that the impact of differences in management ability can be minimised. The selection of the comparison groups should be done by selecting groups of farms that fall within a specified range of values for defined parameters so that comparable conventional farms should:

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- have similar natural production conditions
- be located in the same 'region'
- have a similar endowment with production factors
- be of a similar farm type

The exact specification of the variables can depend on national circumstances and data availability. It should be noted that if organic farms present a sufficiently high number of all farms in a region, the comparison procedure may become easier. Specific matching may not be needed anymore, as the organic farms can simply be compared to all conventional farms of similar farm type and same size in the respective region.

Time series of the development of the income of organic farms in comparison to conventional farming are often more valuable than the single-year snapshots. Such time series can in principle be compiled on the basis of the published information from national yearbooks for several countries (e.g. Germany, Denmark, Switzerland, Austria, see Offermann, 2004, for results). However, these time series face two problems. First, it has to be taken into account that FADN samples are changing over the years, with some farms being dropped from the survey and others being taken up. This issue is aggravated for organic farming, as the number of organic farms has increased, and often still is increasing, quite significantly. The development of average results therefore provides an insight into the average income situation of the current sample - changes in the situation however cannot easily be attributed to changes in the political or market environment as they could also be due to the changes in the samples. The second problem is that often the criteria and procedure to select the conventional reference groups has changed (repeatedly) during time, making inter-temporal comparisons difficult.

These problems can be overcome using time series of identical farms. Within the project EU-CEEOPF, an analysis of a set of farms identical over time has been done for Austria, Germany, Italy, and Switzerland (Nieberg et. al., 2005).

Organic farming in the EU FADN: Analysis of direct payments and profits

In recent years, organic farming issues have increasingly been highlighted in general European agricultural policy topics. The need for well-founded fact based analyses often stood in contrast to the incomplete data availability in many areas of organic farming (Recke et al., 2004). The identification of organic farms in the EU FADN from 2000 onwards finally offered the possibility providing respective analyses on farm level on a European scale, and was explored in two studies:

- The Commission DG Environment in 2002 commissioned a study to analyse the effects of the CAP on environmentally friendly farming systems, using organic farming as an example (Håring et al., 2004). Within this study, the analysis of direct payments using the EU FADN database constituted an important part. As the FADN year 2000 was used, the analysis was restricted to the ten countries where fully organic farms could be identified.
- The European Environmental Agency commissioned a study on the IRENA¹ indicator 5.2 'Organic prices and incomes'. Within these studies, the EU FADN was used for an analysis of income indicators.

¹ 35 Indicators Reporting on the integration of Environmental concerns into Agricultural policy (IRENA) are defined by COM (2001) 144 final and have been operationalised as methodology/ data and indicator fact sheets (see webpubs.eea.eu.int/content/irena/index.htm for details). Two of these (nos. 5 & 7) address organic farming specifically.

For both studies, information for comparable conventional farms was extracted from the EU-FADN. For each organic farm in the sample, conventional reference farms were selected based on the selection variables in Table 1.

Table 1: Variable specifications for selecting comparable conventional farms

Area	Indicator specification	Code in EU-FADN
A	1. same (not) less favoured (mountain) area status	A39
	2. same altitude zone	A41
B	same FADN region (NUTS 1)	A1
C	1. similar size in hectare (+/- 20% or +/- 10 ha)	SE025
	2. similar milk production (+/- 20% or +/- 25t)	K162QQ + K163QQ
	3. similar sugar beet production (+/-20% or +/- 100t)	K131QQ
D	8 farm type categories based on principal farm type classification	TF8

The analysis of FADN data for the year 2000 showed that in the ten EU countries analysed, organic farms in the EU in total received 20 percent more CAP payments per hectare than conventional farms (Figure 1). This results from the fact that, on average, organic farms received more than 70 percent higher payments from the agri-environmental and LFA area payments than conventional farms. Organic horticultural and arable farms benefit most from agri-environmental and LFA payments compared to similar conventional farms, permanent crop and grazing livestock farms benefit least. However, organic farms on average received approximately 18 percent fewer direct payments per hectare from the Common Market Organisations (CMO) than comparable conventional farms. The differentiation of the payments by CMO helps explain the reasons for this difference. Organic farms received significantly fewer compensatory area payments for cereals, oilseeds and protein crops (COP payments), as these are made for certain crops of which organic farms often grow less due to the need for a broader crop rotation and the use of leys for fertility building (see Häring et al. 2004 for further details).

The analysis of the financial performance is based on data from the EU FADN 2001. Farm Net Value Added (FNVA) and Family Farm Income (FFI) of organic farms were compared to the respective values of conventional reference groups.

- FNVA measures the return to labour, land and capital resources irrespective of their ownership (e.g. tenanted or owner-occupied, family or paid labour, own or borrowed capital), so that the profitability of similarly structured farms can be compared. As labour intensity may be different on organic and conventional farms, the FNVA is shown per unit of farm labour, measured in agricultural work units (AWU).
- FFI provides information on the return to land, labour and capital resources owned by the farm family, as well as the entrepreneur's risks. To account for differences in family labour use on organic and conventional farms, the FFI is shown per family work units (FWU).

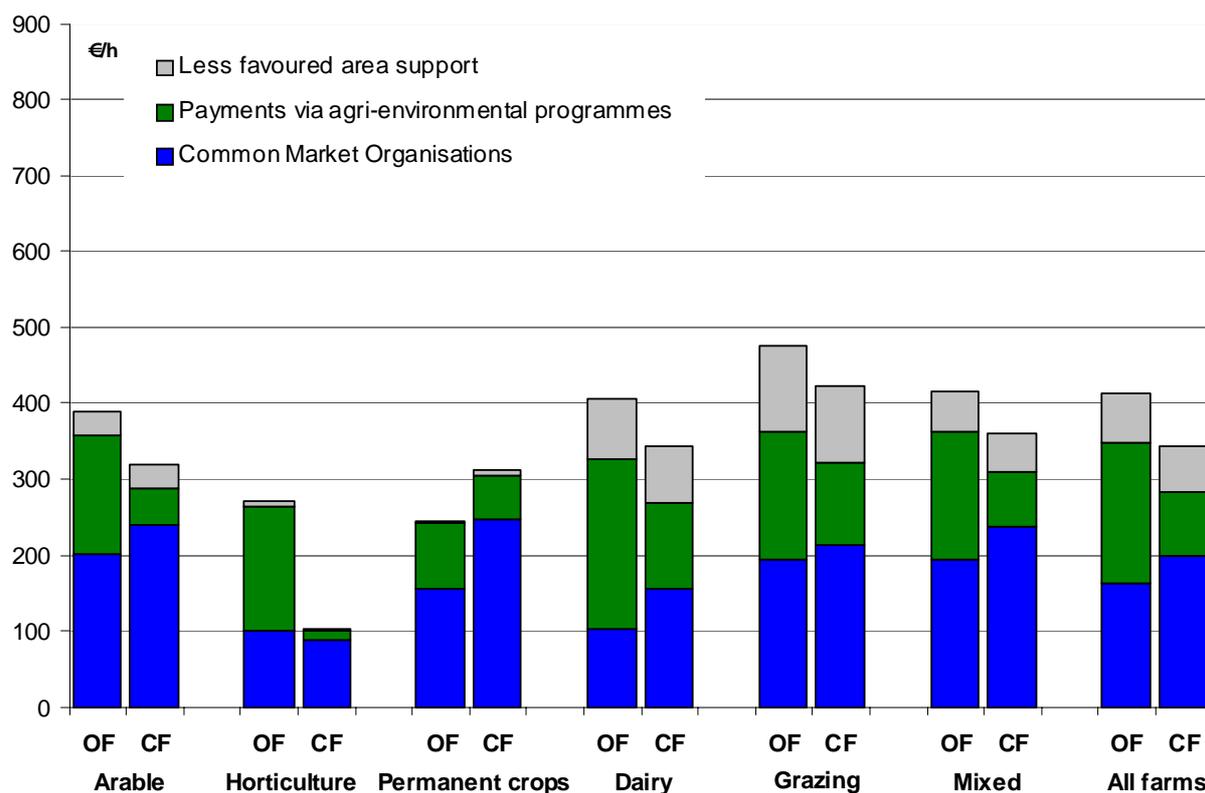
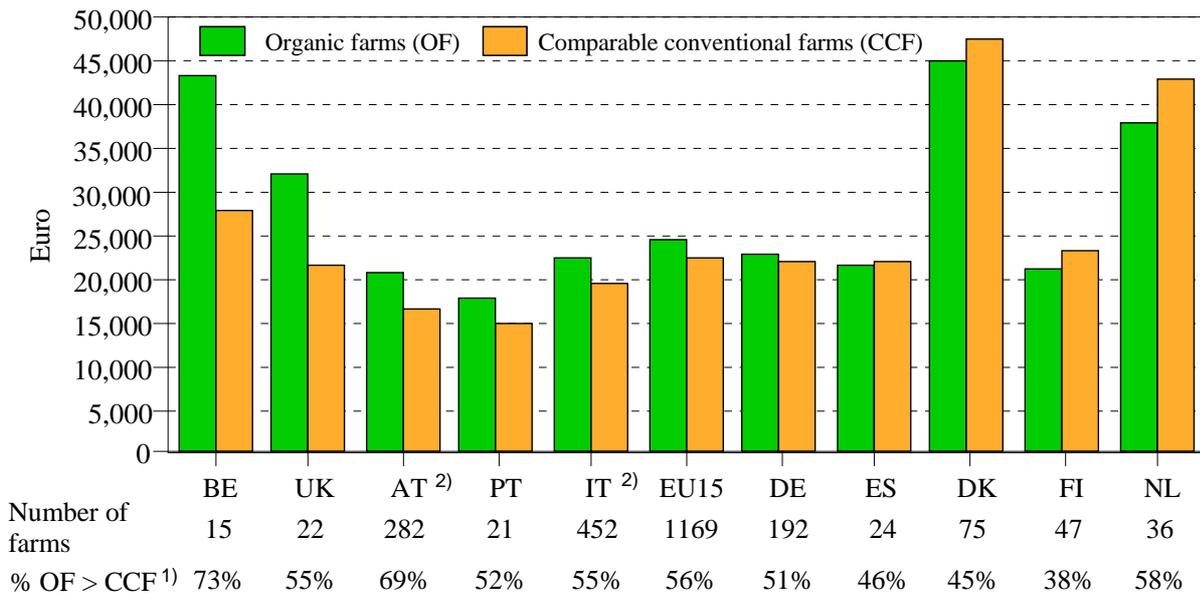


Figure 1: Direct payments to organic and comparable conventional farms in the EU-FADN in 2000, EUR/ha UAA

OF = organic farms, CF = comparable conventional farms Source: Häring et al. (2004)

The analysis showed that on average, organic and comparable conventional farms achieved similar incomes. In six of the ten countries for which data are available, and on average for the EU, FNVA/AWU was similar or slightly higher on the organic farms (Figure 2). Overall, 56 percent of organic farms had incomes higher than their comparable conventional farm group.

However, the variability in labour income is high in both the organic and the conventional farm samples. As a consequence, in combination with the generally small sample sizes, the difference of the organic and conventional averages is statistically significant only in Italy and Austria. In these two countries, on average FNVA/AWU is higher in organic than in comparable conventional farms. However, even with average FNVA/AWU being 25 percent higher in the organic farm sample in Austria, about one third of the organic farms in this sample fare worse than the respective comparable conventional farm, indicating the significant influence of farm and farm manager characteristics. The small number of holdings for certain countries (BE, ES, PT, UK) mean that for these countries, no general conclusions on the profitability of organic farms can be drawn.

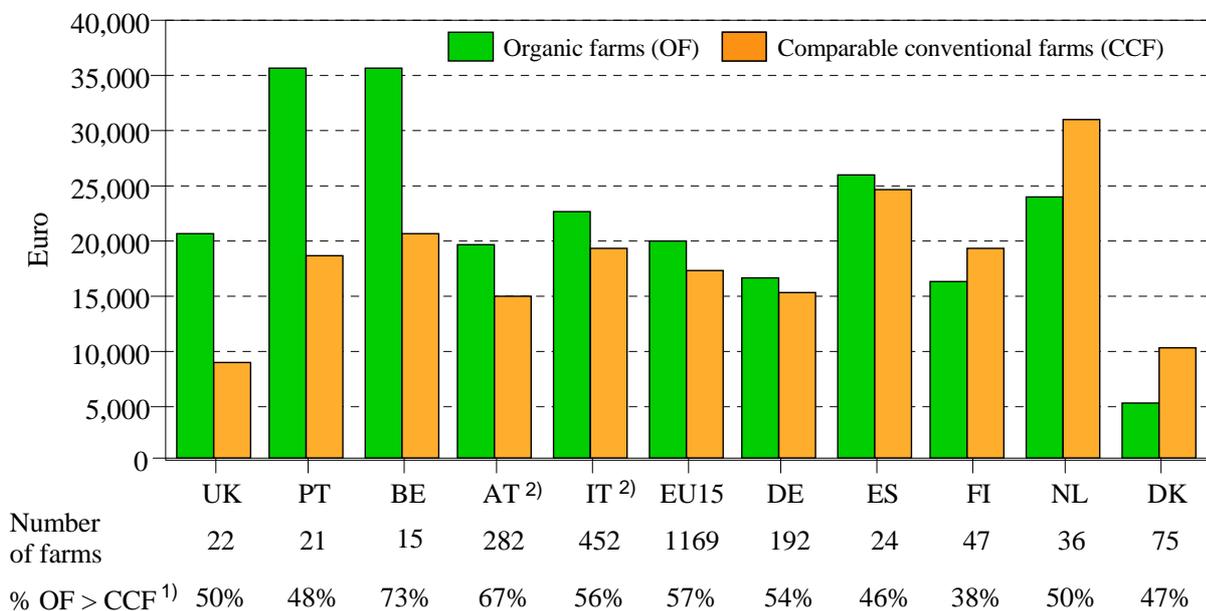


1) Share of organic farms in the sample with a higher FNVA/AWU than the respective comparable conventional farm group.

2) Difference in the sample means of FNVA/AWU statistically significant ($p < 0.05$).

Source: Own calculations based on INLB-EU-GB AGRI/G.3.

Figure 2: Farm Net Coordinator added per Agricultural Work Unit, 2001



1) Share of organic farms in the sample with a higher FFI/FWU than the respective comparable conventional farm group.

2) Difference in the sample means of FFI/FWU statistically significant ($p < 0.05$).

Source: Own calculations based on INLB-EU-GB AGRI/G.3.

Figure 3: Family Farm Income per Family Work Unit, 2001

In most countries, FFI/FWU on organic farms is also similar to or slightly higher than that on conventional farms, but there is much greater variation between countries than for FNVA/AWU (Figure 3). This may be a reflection of differences in the farm types and size represented in the different countries.

Conclusions

The analysis of the already existing data on organic farms contained in the EU-FADN database shows the potential of this mechanism to provide useful data both for policy making and for farm business decision making, but there is much to be done to improve data quality.

The two key areas that need to be addressed in the short term, in order to make EU-FADN a useful, ongoing source of reliable data on organic farming's financial performance, are a) the identification of holdings and main enterprises and b) the sampling framework, with organic management (legally defined by EC Reg. 2092/91) introduced as a stratification criterion and appropriate modifications made to sample weightings. This will require clear guidelines and/or amendments to the FADN regulations at the EU-level, as well as appropriate implementation at national level. At both levels, it would be advisable to liaise with researchers and statisticians experienced in the analysis of organic farming data to ensure that the guidelines/regulations and implementation strategies can actually achieve what is required. However, even if the above changes are implemented, as long as the EU does not or cannot impose a requirement on member states to include more organic farms, utilisation of any new flexibility will depend entirely on member state initiatives. Therefore further discussions are needed at national level to run in parallel with EU-level discussions.

Acknowledgements

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Data Requirements for the Modelling of the Economic Potential for Conversion to Organic Farming

Eva Kerselaers¹, Lieve De Cock and Ludwig Lauwers

Problem definition and objective of the study

Since 2001, the number of farms in Belgium leaving organic farming exceeds the number of new entrants. One of the reasons for this is a biased perception of the economic potential of organic farming. Although most organic farmers prove the opposite, many conventional farmers believe organic farming is not profitable in Belgium (De Cock, 2005). However, insights into the economic potential of organic farming are mostly lacking and the availability of data for organic farms is limited.

In an accompanying paper (Kerselaers et al., 2005), the overall objective is to estimate the economic conversion potential of conventional farms to organic farming, to highlight the heterogeneity between farms and to explain underlying structural factors. Therefore, a model has been developed that estimates the labour income of conventional farms, before and after conversion. This economic evaluation approach is unique with respect to other studies.

The aim of the current paper is to show how this basically normative method copes with the specific data needs. First the modelling principles are explained. Next, data requirements and the contribution of expert's knowledge are described. After illustrating some model applications, problems with data availability and comparison of farm data are discussed.

Methodology

Linear programming (LP) based on conventional farm data is used to obtain information on the (potential) performance of organic farming. The income of individual conventional farms is estimated based on the observed activities of each conventional farm in the FADN (Figure 1). To estimate the (potential) organic farm income, the model designs for each individual farm a new (optimal) organic farm management plan, based on the initial conventional farm structure and on parameters and constraints that are characteristic for the organic production mode. The conversion simulation part makes the developed model useful also as an individual decision support tool for farmers who want to adopt organic farm management and for organic farming consultants.

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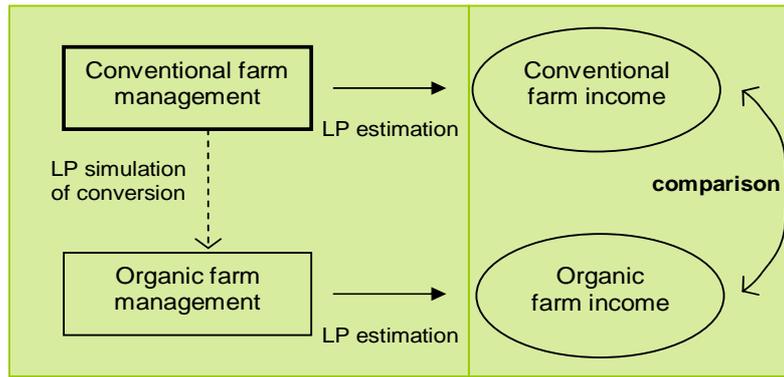


Figure 1: Schematic presentation of the LP model simulations

A comparison of the estimated conventional and organic farm income is then an eligible indicator for the economic potential for conversion. If labour income is higher after conversion, the farm has a positive economic potential. In the opposite case, the farm has a negative economic potential for conversion.

The potential increase of labour income or earned income (PIEI) can be calculated in two different ways. The first possibility is to compare the calculated conventional income with the calculated income of the converted farm, as stated in equation (1). This simple comparison of two situations in equilibrium ($PIEI_{equilibrium}$) shows the difference in revenue between the conventional and the organic farming method. However, this indicator does not take into account the two year conversion period. This conversion period is important in evaluating the economic consequences of organic farming, in particular for studying the reluctance of farmers to go through this transition period between the two equilibriums. Therefore, a second indicator is created that compares the conventional income with the mean income in the first five years after the reconversion decision ($PIEI_{transition}$). The decision to consider the first five years is based on the Flemish premium policy where farmers applying for a subsidy commit themselves to adopt the organic farming method for at least five years.

$$PIEI_{equilibrium} = Z_{organic} - Z_{conventional} \quad (1)$$

$$PIEI_{transition} = \left(\sum_{y=1}^5 Z_{organic,y} \right) / 5 - Z_{conventional} \quad (2)$$

with

PIEI the potential increase of labour income or earned income

Z the calculated labour income (euro per farm per year)

Since all farmers who want to convert will face the difficult conversion period, the second calculation method offers a more realistic indicator of the economic potential of organic farming. The first indicator is still interesting because it demonstrates the possible profit of the organic farming method. A comparison of the two indicators shows the impact of the conversion period on the potential of the farms.

For a detailed description of the model, the objective function and constraints, see Kerselaers et al. (2005).

Data used in the model

Basically, the model is developed to run on conventional farm accountancy data collected in the national FADN. The model has also been tested and calibrated with standard data (e.g. standard gross margins) which allows application to farm structure survey (FSS) data.

As organic farming is a relatively new means of production in Belgium, the collection of organic farm accountancy data is not yet organised. Until now, economic information on organic production has mainly been collected *ad hoc* in various projects and by different actors in the organic sector. The organic economic data on, for example, costs, prices and yields used in the model, are derived from organic farming data available in the Belgian FADN, national and international literature and expert knowledge. The introduction of these organic data in the model is not always straightforward due to their scarcity and the specificity of the experimental conditions in which they are derived. Therefore, the organic data in the model are defined in proportion to the conventional data.

More specifically the following data were used in the model:

- from the Belgian FADN:
 - variable costs for crops on conventional farms: seeds, fertilisers, pesticides, etc.
 - conventional crop yield and product prices
 - gross margin of conventional meat and milk
 - farm structure of conventional farms (number of cows, area of crops, total land area)
- from literature:
 - variable costs on organic farms: seeds, fertilisers, pesticides, others
 - conventional and organic crop yield
 - conventional and organic product prices
 - conventional and organic labour need for crops
 - investment in specific weeding machines
 - nutrient content of crops and manure ('nutrient flow')
 - demand/supply for energy and proteins by livestock/crops ('fodder balance')

The most important literature consulted, is Lampkin & Padel (1994), Newton (1995), PAV (1997, 2000), Offermann & Nieberg (2000) and CVB (1998).

Contribution of sector expertise in building the model

The contribution of a sector expert played a crucial role in the development of the model. The normative character of LP necessitates an interactive model building and verification approach. As long as simulation is done within a rigid framework, the assumptions are very straightforward and outcomes will not deviate substantially from reality. With a more flexible scope, the risk emerges that model outcomes become too optimistic. Therefore, a field expert who advises farmers when converting to organic farming assisted in verifying the input data on organic yields, prices, labour hours, etc. Also the model outcomes, like the crop rotation scheme and the necessary investments, have been intensively examined in order to adapt the model according to field expertise. This resulted in an interactive and recursive modelling process.

Model applications

The model allows for estimating the economic potential for conversion to organic farming on a large set of conventional farms. As such, the model is primarily to be seen as a research instrument, in particular for policy support. With a simple automated organisation, the model can generate transparent outcomes on large data sets. The model flexibility allows for alternative streams of model runs, such as model variants, scenarios and parameterisation steps for sensitivity or impact analysis.

At present the model is used to illustrate (see Kerselaers et al., 2005):

- the impact of the farmer's willingness to change his existing farm management on the economic potential for conversion by running different model variants
- the impact of the two year conversion period on the economic potential for conversion
- large discrepancies between the economic potential of different farm types and between farms within each farm type. The model makes it possible to recognise various farm characteristics that are related to the economic potential for conversion.
- the impact of various kinds of scenario and sensitivity analyses. Their results are an interesting tool to analyse factors that make the economic conversion potential robust or not.

Recently the model has been extended to a multi-period dynamic variant in order to study solvency in more detail. Furthermore, the model could be used as an operational decision support tool for individual farms. For this purpose, the model should be fed with specific, instead of generic farm data on prices, costs, etc.

Problems with data availability and comparison of farm data

The most straightforward method for comparing conventional and organic farms is to compare accountancy data from both production methods. However, in Belgium detailed and actual farm accountancy data for organic farms are scarce. Only a few organic farms are included in the Belgian FADN and the organic farms are extremely heterogeneous, while the decision environment changes through time (changing prices, changing policy etc.). Moreover, most available data are collected during specific research projects and at different times which makes it important to keep an eye on the quality of the data

To deal with these problems and to meet the purpose of the study, a different approach has to be chosen. The advantage of the developed farm model is that not only does it cope with the shortage of organic data, but it also provides a new way of comparing farm data. Based on the model results it is possible to compare the income of each farm in its conventional and a hypothetical organic situation, and this within, on the whole, an equal institutional decision-making environment. Moreover, it is possible to make the same comparison under alternative decision environments. This is interesting for further use as a decision support tool for farmers and policy makers.

If more organic farm data were available it would allow more accurate data input into the model and a better verification and even calibration of the model results. Therefore, an increase of the number and the representativeness of organic holdings surveyed in the Belgian FADN is useful.

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Group 3: Prices

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EISFOM Recommendations for Price Data

Markus Rippin¹ and Raffaele Zanoli²

Price data are important for all market partners for improved market transparency and the ability to calculate returns on investment and profitability of production. As there are currently very few countries collecting production level price data (Germany, Italy, United Kingdom, Denmark, Lithuania), there is an opportunity now to establish common nomenclature and collection parameters. The use of the German (ZMP) classification system and specifications is suggested as the basis for this.

Relevant DCPS as starting points

As a first step, it is advisable to begin price collection with farmer prices at farm gate/ direct sale or wholesale level. This can be achieved by contacting farmers directly and providing them - as remuneration - with a regular market report. Once a first data collection and processing system at this level has been established, it will be possible to extend the area of data collection to other important sales channels, namely:

- farmer to consumer via direct sales – on-farm sales/farmers markets
- farmer to retailer – delivered
- farmer to wholesaler/processor – delivered

At the farmer to retailer and farmer to wholesaler/processor levels, it is recommended that the prices collected should be on a “delivered” basis. Thus prices would be comparable to those received by other farmers without taking into account the cost of logistics for the individual farmer, i.e. prices are recorded at the level of “what would the purchaser pay to the farmer” and the distance which the farmer would need to transport his goods is ignored. As every farmer has different costs for this service, it is up to them to decide whether this contract would be profitable for them or not, depending on prices paid by the purchaser and their own individual production and logistic costs.

Once such a system has been established, it would be advisable to gather prices from the purchasers’ side as well. Wholesalers and processors are often willing to provide the prices paid to the farmer “delivered” in order to receive an overview of price ranges and average prices differentiated according to quality standards as well as regional aspects (see also Gleirscher *et al.*, 2005, section 2.3 Price level). Prices from wholesaler to retailer (provided by the wholesaler) and prices for products sold from farmer to retailer can be combined in order to get an average price at this trade level.

The ZMP and Prezzibio DCPS illustrate possible data collection forms, product parameters defined to provide comparable product qualities and further characteristics (Rippin and Lampkin, 2005), weighting procedures as well as database structures to record and retrieve data. The frequency of data collection (weekly, monthly, quarterly, yearly) depends on human and financial resources as well as market conditions.

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Problematic areas and barriers

The most critical point is to motivate farmers, processors, wholesalers, farmer associations and other possible data providers to report their own prices on a regular basis. As mentioned above, a system of adequate remuneration is needed. Preferably this would be a weekly report on the market situation and results of price collection, but it must also be borne in mind that those companies who have the highest importance and market share often need to be contacted regularly by phone in order to exchange information live. Both partners should have information to share in order to establish a sound partnership.

Sometimes it is necessary to start with a closed user group in order to exchange data and results only within the participating partner. Once the system is established and working well, publication of a market report is normally accepted.

Weighting of prices in different market channels and for different products is problematic as data about volumes sold are very scarce. Farmers do not monitor the volumes sold, especially in relation to the high number of different vegetable varieties. Exact volumes can be obtained when receiving original invoices, as is usual for collecting prices for livestock and milk. Otherwise ZMP has a system of weighting prices by area cultivated for the different product groups and the corresponding share of individual data providers within the whole group.

Problems are likely to arise if only a few companies supply a major share of the market. These companies would try to keep transparency about the market only for themselves. The more diversified the market structure, the higher the chances of support from companies, as all players in the market need more market information.

Due to varying varieties, especially in the fruit and vegetable market, comparison of data between different countries will be difficult in some cases and the breakdown of products and specifications limited.

Recommended classification systems and procedures

The proposed classification list and nomenclature (Rippin and Lampkin, 2005) was derived from the experience of ZMP¹. Those products currently included in the ZMP price monitoring system are present in this list. Levels of aggregation, specification of varieties, quality standards, packaging parameters and further specifications are the result of 14 years' experience in Germany. This level of detail is needed in order to get price data which is useful for market partners.

On the European level and for comparison issues, it might be necessary to increase the level of aggregation and reduce specification parameters. In order to start a price collection and monitoring system, it might be advisable to begin with a small part of the recommended production list and increase the number of products observed gradually.

Not all products listed occur in all market channels. Some fit only in one channel, as in the case of "animals for slaughter" for example.

Where a conventional price collection and processing system already exists in a country (e.g. Lithuania), it would be possible for some market channels to use the established structure to additionally collect price data for organic products. This is especially the case for "animals for slaughter", "milk delivered to dairies", "potatoes at packaging stations" and for all other products traded at central or wholesale market

¹ This classification / nomenclature is available from the EISfOM website at www.eisfom.org/publications/index.html

places such as Bologna in Italy. This method would generate useful data for some core products at very low cost.

Recommended reference systems

Countries or organisations interested in establishing a price data collection and processing method for their country or region are advised to consult ZMP in Germany or Prezzibio in Italy to obtain some helpful information, advice, material and probably software tools which will facilitate the process.

In Germany, an SQL-based database has been set up to record and retrieve price data for different levels and products, regions, specifications and other parameters. ZMP is willing to share this knowledge in order to support efforts relevant to this issue.

In future, contacts with other countries already working on similar systems will be established and efforts made to find common methods to ensure the harmonisation of price data collection and processing methods in Europe. Initially, contact will be made with the United Kingdom and Denmark.

If these data are available, it will be possible to generate an overview of prices along the whole chain from producer, via wholesaler and retailer, to the consumer as is case in Germany and Italy (see figure).

Level of price collection by Prezzibio and ZMP

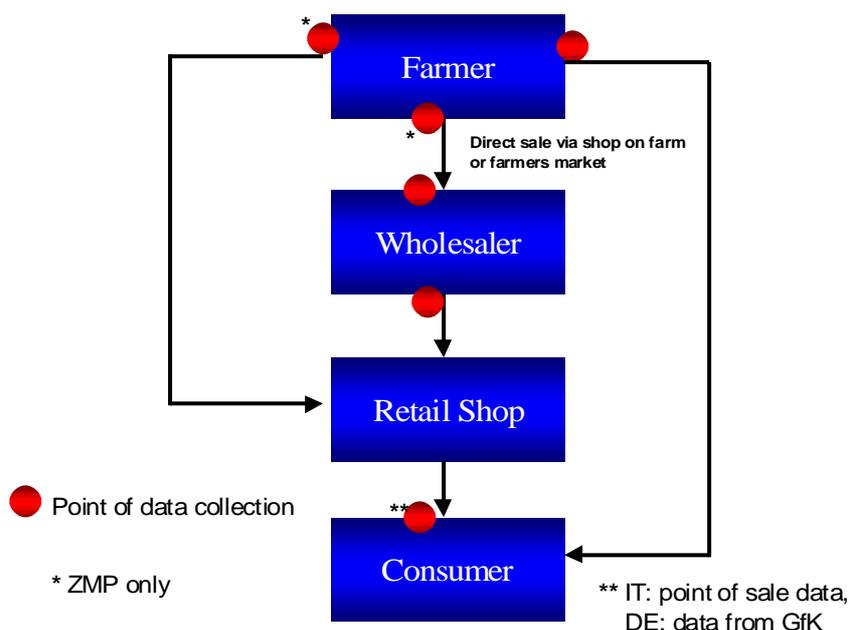


Figure: Levels of price collection by Prezzibio and ZMP

Actions needed at the European level

As no standardised classification system and nomenclature for price data (farmer-, processor-, trader- and consumer-level) exists, the process should be started, in collaboration with Eurostat, to set up a classification system based on the ZMP proposal as a reference for all European countries.

Time, cost frames and funding

A minimum of one year is needed to establish a functioning recording and processing system for one product group and one market channel if 12 person months are assumed to be available. Product groups relevant in this context are:

1. fruit and vegetables
2. cereals and potatoes
3. livestock, milk and eggs.

A country with a market size, market structure and number of organic companies comparable to Germany would need to devote 36 person months to establishing a complete system.

Additional costs would arise from the establishment and running of data entry and management of clients. This would require an additional four person months for each product group when the systems are operating with considerable amount of data provided. Dissemination and reporting of results via a weekly or monthly market report would generate additional costs for printing and mailing services.

Smaller countries with less diversified market structures could reduce these costs considerably. Starting with just a few key products for the main market channel would also mean a significant reduction in the budget needed.

Funding such a system is particularly difficult in the start-up period. From the ZMP experience, once it is up and running the system could recover about 20-30 per cent of its costs through the sales of market reports and consultation services.

As data providers and users are often similar companies, and data providers are granted access to the data free of charge, it is unlikely that it would be possible to finance such a system 100 per cent by selling results and market reports.

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- Rippin, M. and Lampkin, N. H. (eds.) (2005) Draft Recommendations for a Framework for a European Information System for Organic Markets. EISfOM project (QLK5-2002-02400) deliverable D4 submitted to European Commission. ZMP, Bonn. www.eisfom.org/publications.

Defining an EU-Reference System for Price Collection and Processing for Organic Products

Markus Rippin¹

<p>Market Channels Point of Data Collection</p> <ul style="list-style-type: none"> → farmer to consumer direct sales → farmer to retailer → farmer to wholesaler/processor → consumer prices <p>Which channel has priority for your country ?</p>	<p>Market Channels Point of Data Collection</p> <pre> graph TD Farmer[Farmer] --> Wholesaler[Wholesaler] Wholesaler --> RetailShop[Retail Shop] RetailShop --> Consumer[Consumer] Farmer --> Consumer </pre> <p>● Point of data collection</p> <p>* ZMP only</p> <p>** IT: point of sale data, DE: data from GfK</p>
<p>Defining Trade Parameter and Product Specification</p> <ul style="list-style-type: none"> → transport and logistics → packaging parameter → quality of products 	<p>ZMP/Eurostat Classification Lists</p> <ul style="list-style-type: none"> → level of aggregation → product hierarchical system (type of plant categorisation) → coding system / correspondence table (design data interface)
<p>Collection Methodology</p> <ul style="list-style-type: none"> → fax, mail, telephone, internet → frequency of census → database for recording and retrieving of data 	<p>Motivation and Remuneration</p> <ul style="list-style-type: none"> → feedback (oral, print medium, mail, internet) → market report → Starting with closed user groups → incentives

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<p style="text-align: center;">Example: Lithuania</p> <p>→ Existing conventional system adapted for organic data collection</p>	<p style="text-align: center;">Consultation and Implementation</p> <p>→ Experience of DE and IT and other countries ?? can be used</p> <p>→ Study visits or workshops financed by TAIEX Program</p> <p>→ Database tool for free</p>
<p style="text-align: center;">Cost Frame</p> <p>→ 12 person month per product group</p> <ul style="list-style-type: none"> - fruit&vegetables, - potatoes&cereals - animal production <p>→ 12 person month for data recording and processing</p> <p>→ Up to 30% of costs can be generated by selling report</p>	<p style="text-align: center;">Time Frame</p> <p>→ for each product group 12 month are needed to get started with the data collection</p> <p>→ After 10 years of gradually broaden data quantity and quality the system is working well in Germany</p>

Osservatorio Prezzi Bio: A Model of Analysis of Price Trends on the Organic Food Market

Francesco Giardina¹ and Benedetta Torani²

 <p>PROJECT AIMS</p> <ul style="list-style-type: none"> • Improving transparency in commercial transactions • Analysing relations within the agri-food chain • Providing a cognitive tool for deeper analysis of the sector • Contributing to create a national informative system on organic farming 	 <p>PROJECT ACTORS</p> <ul style="list-style-type: none"> - Operators dealing with organic farming - Consumers - Students and Researchers
 <p>PROJECT TOOLS</p> <ul style="list-style-type: none"> - Price-Lists at production level - 15 days survey - Price-Lists at distribution level - 15 days survey - Price-Lists at consumers level in specialised shops - Monthly survey - Price-Lists at consumers level in supermarkets - Monthly survey 	 <p>MONITORING METHOD The monitoring is carried out into 12 sample towns</p> <p>PRODUCTION AND DISTRIBUTION: └───> price lists collected from a network of sample farms</p> <p>SPECIALISED SHOPS AND SUPERMARKETS: └───> data collected by a surveyors network</p> <p>FARM MARKETS: └───> data collected by a surveyors network</p>

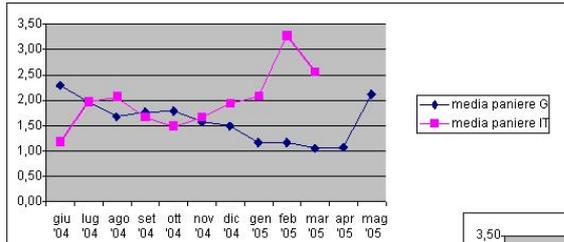
¹ Francesco Giardina, Azienda Romana Mercati (ARM), IT-Roma, Italy, Internet www.romamercati.com and www.prezzibio.it

² Dr. Benedetta Torani, AIAB - Associazione Italiana per l'Agricoltura Biologica, Via Piave 14, IT- 00187 Roma, Italy, Internet www.aiab.it

 <h3 style="text-align: center;">SURVEYS CARRIED OUT</h3> <p>Price trends along a given period of time</p> <p>The "value" chain: the shares of the final price pertaining to producer, distributor and consumer</p> <p>Comparison of selling channels: fruit and vegetable prices on supermarket chains and specialised shops</p> <p>Comparison between organic and conventional farming: prices at</p>	 <h3 style="text-align: center;">SURVEYS UNDER DEVELOPMENT</h3> <p>Supermarket chains Vs Specialised Shops: processed food products monitored</p> <p>Surveys on a regional basis: Piemonte</p> <p>Processed food: price trends at consumer level</p> <p>Price trends on short chain: Biomonitor Project</p>
 <h3 style="text-align: center;">SURVEYS UNDER DEVELOPMENT: monitored products</h3> <ul style="list-style-type: none"> • Milk - cheese - eggs • Cereals - legumes - flours • Oil and seasoning • Dried and special • Beverages 	 <h3 style="text-align: center;">CRITICAL POINTS</h3> <p style="text-align: center;"><i>Monitoring prices at production level</i></p> <ul style="list-style-type: none"> - Few farmers have price lists - The high productive specialisation - Producers become acquainted with the final selling prices at the end of the selling campaign - It is necessary to set up a surveyors network <p><i>Note: to complete price-lists at this level PrezziBio must often refer to the</i></p>
 <h3 style="text-align: center;">CRITICAL POINTS</h3> <p><i>Monitoring prices at distribution level</i></p> <p>There are different official bodies monitoring prices at wholesale level but they mainly operate on a restricted territorial basis</p> <p><i>Note: distributors are the main source for price data for PrezziBio</i></p> <p><i>Monitoring prices at consumer level</i></p> <p>Financial resources are needed to implement the surveyors network</p>	 <h3 style="text-align: center;">PREZZI BIO: NEXT STEPS</h3> <ul style="list-style-type: none"> - BioMonitor: monitoring prices at farmers market and purchasing group - Comparison between the Italian and German price trends on some given products
 <h3 style="text-align: center;">BIO MONITOR</h3> <p>Higher prices on direct sale, compare to distribution, are needed to cover farmers extra work on managing the sales</p> <p>Cheaper prices, compare to shops, are needed because consumers should afford some difficulties, going to farmer shops or dealing with a purchasing group</p> <p>The "cassettone bio": the fair way economically and operationally</p>	 <h3 style="text-align: center;">ITALY VS GERMANY</h3> <p style="text-align: center;">Prezzi Bio and ZMP Zentrale Markts und Preisberichtsstelle</p> <p>PrezziBio and ZMP (Zentrale Markt und Preisberichtsstelle) worked together to analyse price trends on some given products</p> <p>Market structure's differences:</p> <ul style="list-style-type: none"> - Italy: high production, low consuming - Germany: high consuming, high imports <p>Food chain structure's similarities:</p> <ul style="list-style-type: none"> - Three main actors: farmers, distributors, shops. - Growing of direct sales

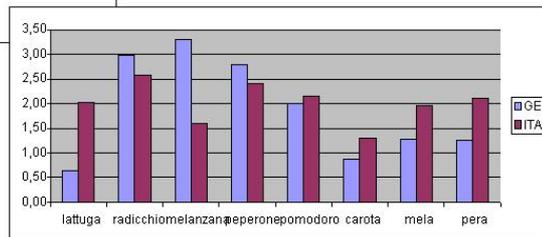
ITALY VS GERMANY

Average prices: higher in Italy than in Germany



Average price changing along a given time

Average price changing within the products panel



ITALY VS GERMANY average prices

Average prices on the given panel for both Countries - June 2004-May 2005

	giu '04	lug '04	ago '04	set '04	ott '04	nov '04	dic '04	gen '05	feb '05	mar '05	apr '05	mag '05
lattuga GER	0,57	0,51	0,51	0,53	0,59	0,58	0,43				1,04	0,88
lattuga ITA		1,60	2,01	1,62	1,48	1,79	2,12	2,17	2,85	2,63		
radicchio GER	3,56	3,44	3,29	2,82	2,61	2,56	2,56					
radicchio ITA		2,94	2,89	2,25	1,78	1,70	1,99	2,59	3,41	3,69		
melanzane GER	3,87	2,94	2,46	2,59	2,65							5,39
melanzane ITA		1,85		1,18	1,18	1,29	1,96	2,13				
peperone GER	3,21	2,86	2,90	2,88	2,75	2,32	2,57					
peperone ITA		1,93	1,92	1,50	1,42	2,03	2,18	2,51	4,40	3,78		
pomodoro GER	2,55	2,10	1,52	1,68	2,05	2,04						
pomodoro ITA	1,22	1,67	1,90	1,55	1,36	2,23	2,25	2,25	3,94	3,15		
carota GER	1,19	1,04	0,94	0,89	0,83	0,81	0,74	0,76	0,78	0,81	0,83	0,83
carota ITA	1,14	1,12	1,15	1,51	1,11	1,12	1,34	1,19	2,17	1,21		
mela GER	1,14	0,96	0,92	1,33	1,42	1,40	1,40	1,40	1,37	1,37	1,35	1,38
mela ITA		2,22	2,29	1,88	1,97	1,58	1,78	1,77	2,60	1,62		
pera GER			0,90	1,44	1,39	1,31	1,27	1,33	1,36	0,98		
pera ITA		2,45	2,27	1,83	1,59	1,58	1,85	2,02	3,54	1,80		
media paniere GER	2,30	1,98	1,68	1,77	1,79	1,58	1,50	1,16	1,17	1,05	1,07	2,12
media paniere ITA	1,18	1,97	2,06	1,66	1,49	1,66	1,93	2,08	3,27	2,55		

CRITICAL POINTS monitoring italy

- Defining the food chain structure
- Defining the testing points: the retailer is the only certain point
- The selling price is more accessible than the acquiring price
- The valuation methods: it is necessary to well define all methods.

CRITICAL POINTS monitoring Germany

- Defining each product's nomenclature
- Defining each product's itemized technical list
- An European project is necessary to define all

Experiences of Organic Consumer-Producer Cooperatives in Andalusia (Spain): Composition of the Prices

Itziar Aguirre¹

Background

Consumer-producer cooperatives are common stakeholders in the organic market in Spain, and especially in Andalusia, a region which includes more than 48 percent of the total organic production in Spain. These cooperatives were established in January 1993 and link local producers with local consumers in order to promote more sustainable organic agriculture and to improve the supply of organic produce.

Methodology

Five Andalusian cooperatives participated on a survey in order to determine the prices for organic fruits and vegetables during the summer of 2005. Results were compared with conventional produce prices, because price data for organic produce are not yet available for the Spanish market.

Prices of the organic produce in these cooperatives tend to remain stable in order to protect organic producers and consumers. It is acceptable to vary the prices by no more than ten percent if necessary. Conventional prices were recorded from a professional farmers' organisation (UPA, 2005).

Results and discussion

The data shows that while organic produce offered at these cooperatives allows farmers to keep more than 65 percent of the consumer price, for conventional farmers this percentage never exceeds 15 percent. Organic consumers at these cooperatives pay 25-40 percent above the farmer price, while conventional consumers are paying 367-1900 percent above the grower price (UPA, 2005).

According to previous work, prices are linked with the number of stakeholders on the supply chain (Aguirre, 2002).

Regarding the development of a more sustainable organic agriculture, a key issue should be the distribution of the monetary value along the supply chain.

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UPA, 2005. Events. www.upa.es

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Experiences of Collecting Direct Sales Data in the UK

Natalie Geen and Chris Firth¹

Problems / Aims

In recent years rapid expansion in the UK market for direct sales of organic products has been reported. However, actual and potential development were unknown as the sector was essentially unrecorded.

In order to strengthen the direct sales aspect of the Defra-funded UK Organic Vegetable Market Study, HDRA performed a survey of organic vegetable direct sales operators in February 2005. The aims were to quantify the value of the organic vegetable direct sales market, and to collect qualitative data on the dynamics of the market.

Methodology

A two-page questionnaire was sent to 413 organic vegetable direct sales operators in the Soil Association Organic Directory and other outlets found through web-based research. The questionnaire asked for details of turnover and sourcing with a crop category and outlet breakdown. Questions were included to identify potential double counting from farm and wholesale trade. Responses were chased, collated and analysed by HDRA.

Results / Issues

A 48 per cent response rate was achieved. Results will be disseminated to stakeholders through the UK Organic Vegetable Market Study report, the Soil Association Organic Food and Farming report and the UK farming press.

Only operators in the Organic Directory or with web-based marketing were sent the survey, as the total population of organic vegetable direct sales operators in the UK is unrecorded. Additionally the level of scaling up to represent the total population, and farm-based population, was estimated and the sample was assumed to be representative. Values were converted to volumes using average prices from known direct sales outlets, a potential weakness as the sector is very diverse. The diversity of the sector also hindered categorisation and definition of the various direct sales channels. Trade between farms was a particular grey area. Hence direct sales were defined at those passing directly from farmer to consumer, and so only included produce that was produced and sold from the same farm. Trade between UK farms (for example, buying in extra vegetables for a box scheme) was calculated separately.

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Firth, C., Geen, N., Hitchings, R. (2005) The UK Organic Vegetable Market (2003-04). HDRA, Ryton Organic Gardens, Coventry.

¹ Natalie Geen and Dr. Chris Firth, Henry Doubleday Research Association (HDRA), Ryton Organic Gardens, Coventry CV8 3LG., Internet www.gardenorganic.org.uk

Experiences of a Price Exchange Group for UK Organic Vegetable Growers

Natalie Geen and Chris Firth¹

Background

The pilot price exchange group is an innovative action which forms part of the Defra-funded Sustainable Organic Vegetable Systems Network project at HDRA. The main objective is to provide weekly price information for organic vegetable growers for the 2005-06 season, and to discover practical problems of operating such a group. It was set up in response to a lack of available price data and no government price collection scheme for organic products.

Methodology

Data collection forms were faxed or emailed to eight participating growers weekly. Completed forms were returned to HDRA the following day. The average and range of ex-farm prices were calculated. Wholesale and five key supermarket prices were obtained from websites. All price levels were entered on a statistics form and returned to each grower the same day (Table 1). Vegetables included were potatoes (early, ware and baker), calabrese, cauliflower, cabbage, leeks, celery, carrots, lettuce, runner beans and sweet corn.

Table 1: Example section of statistics form 2005 (prices falsified to respect confidentiality).

Crop	Types included	Ex-farm		Wholesale	Retail					
		Average	Range		Details	Tsco	JS	Mrsn	Asda	WR
Potatoes – Early (£/kg)	Nicola, Orla Junior,	0.69	0.47 – 0.93	0.71 (↓) (Junior,UK)	New	0.89	0.86	N/F	N/F	1.26 (↓)
Potatoes – Ware (£/kg)	Romano, Nicola, Valor	0.52 (↓)	N/A	0.58 (UK)		0.86	0.91	1.01	0.78	1.04(wte) 1.20 (red)

Results / Issues

Growers participating were provided with the required up-to-date and important market data. Confidentially agreements meant information was kept within the group. Chasing data from growers was often necessary and resource intensive. For some crops it was difficult to find comparative equivalents for farm and supermarket levels, hence types were always specified.

Funding is currently not available outside of the Sustainable Organic Vegetable Systems Network project to enable the group to be expanded and developed. This would enable more growers to participate, key market outlets could potentially be separated and data would be more representative of the sector. Yet logistics would need to be readdressed, as chasing a great number of farmers would not be practical. Additionally the Internet could be used to collect and disseminate information. However the small group has a lot of confidentiality and trust which might be lost with a larger process.

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References

Firth, C., Geen, N., Hitchings, R. (2005) The UK Organic Vegetable Market (2003-04). HDRA, Ryton Organic Gardens, Coventry.

Group 4: Consumption

Coordinator: Toralf Richter¹

Chairs: Susanne Lux², Toralf Richter and Sylwia Zakowska-Biemans³

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Approaches to Improving the Availability of European Organic Consumption and Retail Data – Methodological and Economic Issues

Toralf Richter¹

Introduction

There is a clear need for more extensive and better quality data on the organic consumption and retail sector expressed by different actor groups including policy makers, statisticians, researchers and others involved in the organic market (Recke et al., 2004). However, actor requirements for data differ in detail with regard to completeness, accuracy, timeliness and punctuality, comparability and coherence. In this context, this paper describes the instruments used at present to measure organic consumption and retail data, which does not allow comparison between European countries. Within the given political and budgetary framework, it also discusses approaches to obtaining a set of most relevant organic market indicators which would fulfil all the quality requirements from an economic point of view.

Utility function of organic retail and consumption data

The requirements for organic consumption and retail data of different user groups can be shown by a microeconomic utility function as presented in Figure 1. The three utility levels (u_1 'lowest utility', u_2 'medium utility', u_3 'highest utility level') represent different actor group utilities and requirements with regard to organic retail and consumption data. The utility depends on the data availability and quality as represented in the x-axis. The x-axis comprises the whole range of possible sets of available organic consumption and retail data differing by quality and quantity parameters (q_1 'basis data set' - small set of data which has not been quality checked and harmonised', q_2 'medium data set' - quality checked and harmonised set of key indicators for organic consumption and retail statistics, q_3 'comprehensive data set' - quality checked and harmonised set of organic consumption and retail statistics which cover the normal statistical scope of consumption and retail data).

While researchers and some category and sales managers demand comprehensive, detailed and accurate data sets ($u_3; q_3$ - 'maximum data requirements'), politicians, journalists, trade promotion agencies and lobby groups mostly demand certain time series of key indicators which describe the organic market development (like organic sales by volume and value, market share of organic products, etc.), as represented in $u_2; q_2$ ('medium data requirements'). Other groups of market decision makers or representatives of nature and environmental protection groups mostly require just rough estimations and general market description and information about organic sales and consumption or qualitative organic sector reports, as represented in $u_1; q_1$ ('minimum data requirements'). In a situation of high market competition there is even the explicit wish from many market actors or lobby groups that no exact statistical data and market estimations should be published in order to keep further competitors out of the organic market.

The utility function (U) does not follow a linear curve. The marginal utility decreases as access to data sets and data quality increases because the general direction of data probably does not change.

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The derived cost function curve (P) in Figure 1 also indicates no linearity. While the costs of minimum data set availability ($p1; q1$) are quite reasonable, the costs for more comprehensive, quality checked and harmonised data sets ($p2; q2$ till $p3; q3$) increases disproportionately due to methodological and organisational issues.

The described characteristics of the utility function suggest initial conclusions:

1. The requirements and the corresponding willingness to finance market transparency about organic consumption and retail data vary strongly between different user groups and decrease by declining of marginal utility for each further unit of enlarged/quality checked data access.
2. Therefore, it would be difficult to achieve a common 'best solution' which would satisfy all user group data requirements and resolve the trade off between needs and cost/legal/political/methodological constraints which limit data access. Regarding several constraints, it seems crucial to identify a set of the most relevant indicators for organic consumption and retail sales.
3. It is preferable to start the first steps from the current poor situation $u1; q1$ toward $u2; q2$ (quality checked data for most relevant consumption and retail data) than to remain at this low level.

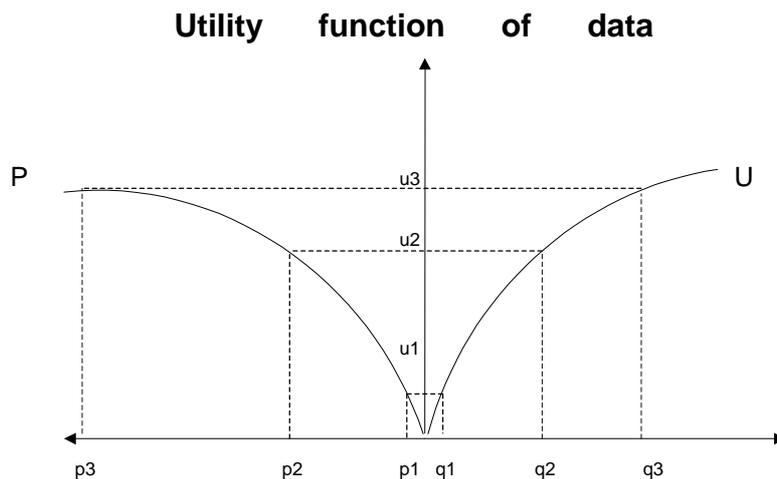


Figure 1: Utility and cost function for organic consumption and retail data collection

In recent years the availability of comprehensive consumption and retail data sets depended very much on national or individual activities (such as ZMP in Germany or LEI in the Netherlands, both strongly supported by national funding schemes).

Current national approaches on organic consumption data

At present there are no official statistics in a common format on consumption volumes and values within the organic sector. Several approaches are used on the national level to obtain information about organic volumes and expenditure on organic consumption, as well as information about organic retail sales and volumes (see Figure 2). Published retail or consumption data for individual countries are derived using different methods. In the main consumption data are gathered by private household panels (e.g. Germany, Netherlands, Switzerland, Austria, UK) run by market research companies such as TNS or GfK, consumer surveys or enlarged household budget surveys (e.g. Switzerland). All three approaches lack

methodological fine tuning based on consumer failure in correct product recognition. Even national data from the same sources (e.g. GfK or TNS) vary because of the different classification systems which are applied to suit the main national customers.

The European research project OMIARD gathered national consumption volume and value data based on supply balance sheet calculations (national consumption calculated on the basis of national production, foreign trade and change in stocks). But the production and foreign trade figures were often simply best estimates from national market experts and therefore implied methodological errors.

Current national approaches on organic retail data

Likewise, there are no official retail statistics for organic sales volumes and values. The most common approaches use retailer panel data (see Figure 2), but most existing retailer panels cover only a part of the total market (conventional retail chains or organic retailers). Furthermore, not all retailer panel data are representative since some actors refuse to deliver the data and sometimes products without barcodes are not covered. Also, because of the high cost of data from retailer panels, only small data sets are freely available. In smaller countries, such as Switzerland and Denmark, a survey of the biggest national retail chains is carried out but since these data do not cover the total retailer population estimates must be used to fill the gaps. Wholesaler based surveys (including retailer margins) have been used in the past to determine the national retail sales, e.g. in Italy.

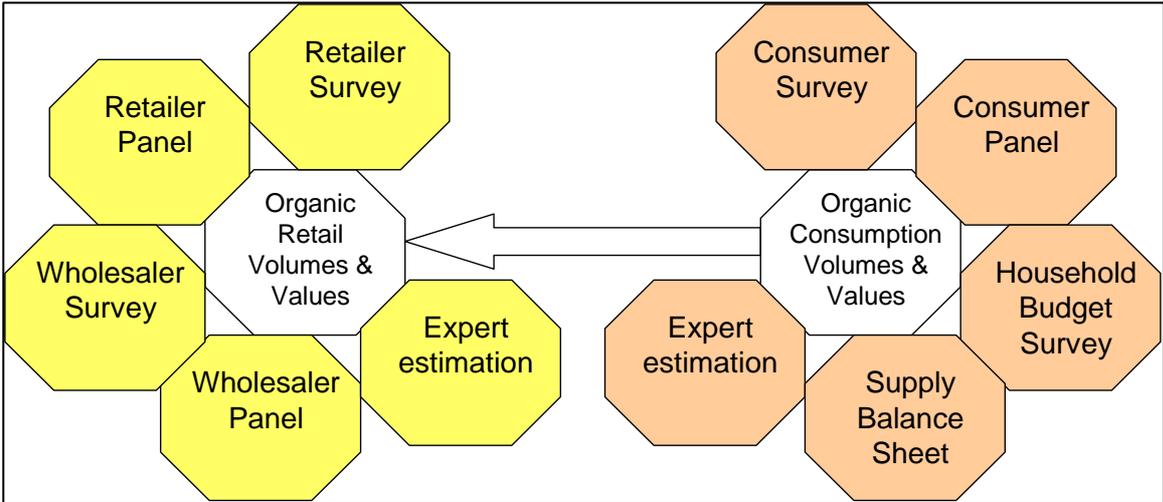


Figure 2: Some methods used to estimate organic retail and consumption data

However, it is not just methodological differences in data collection which lead to bias and therefore make international comparisons impossible. Some countries publish retail value data based on consultation with experts at various levels in the organic sector. Some countries include data from sales via restaurants and public services in their national retail sales, whilst other countries add export data to the retail sales, and some countries include or exclude VAT. Some countries publish the data from the multiple retailer sector as national data for the whole organic sector, and sometimes data collection methods change from one year to the next.

A further methodological bias occurs when organic retail value data are linked to the total retail value data in order to calculate national market shares in organic food. To some extent data for the total food market have been overestimated in the past and in part organic data are related only to the available data from

conventional retail chains (not including direct sales or sales via specialised shops). In addition, in many European countries organic farming or other sector associations are the source for published data on organic retail sales values. In most cases there is no clear and transparent description of the method of data collection available to the public and, in theory at least, data could therefore be easily manipulated for political reasons.

Overall, the published organic market data available today probably represent the actual development of the organic market with regard to organic consumption and retail sales in very few cases.

Recent European approaches

At present there are no official statistics on organic consumption and retail data available on an international level. Experiences in the last decade indicate that:

- in many European countries only basic data sets are available which would fulfil the requirements of utilitarianism,
- EU-funded research projects (such as OMIARD and OFCAP) represent a level of approximately utilitarianism on the utility function. The data represent the best available sets, although they still lack some aspects of quality such as **accuracy** (many expert estimates or methodological failures are included), **timeliness** (delay between data collection and release) and **trans-national comparability** (different methods of data collection/estimation in different countries). However, once these projects came to an end it was not possible to find funding to continue the data collection
- Without European output harmonisation, it would be impossible to aggregate and compare existing national organic consumption or retail data to a trans-national aggregation level.

Consequences

The problems which relate to the different levels of actor group data requirements, financial and political frameworks and the methodological bias described imply the following consequences:

1. Define the roles and responsibilities within DG Agri and Eurostat and their units responsible for steering the process of Europe-wide data collection and harmonisation for organic consumption and retail data. Identify sources for grants to implement at least a Europe-wide data harmonisation for consumption and retail data for those countries which presently collect data.
2. Connect official statistic providers with commercial market researchers and organic market expert groups on the national level.
3. Establish a Europe-wide expert group for the exchange of data and information concerning national organic consumption and retail data collection.
4. Define a Europe-wide set of relevant consumer and retail indicators for the organic market as part of the further development of the EU Organic Action Plan. The decision to make this minimum set of data available should be agreed by all EU member states.
5. National published data based on private sector estimates should not be used as public figures without plausibility checking by governmental (contracted) institutions (e.g. statistical offices, ministries of agriculture, experienced researchers etc.).

6. Review national availability, methods and classification systems of organic consumption and retail data collection as a pre-condition for data output harmonisation. The next step should be to assess national approaches to data quality and the results of the assessment should be reported.
7. Harmonisation of reported national consumption and retail data at a trans-national level.

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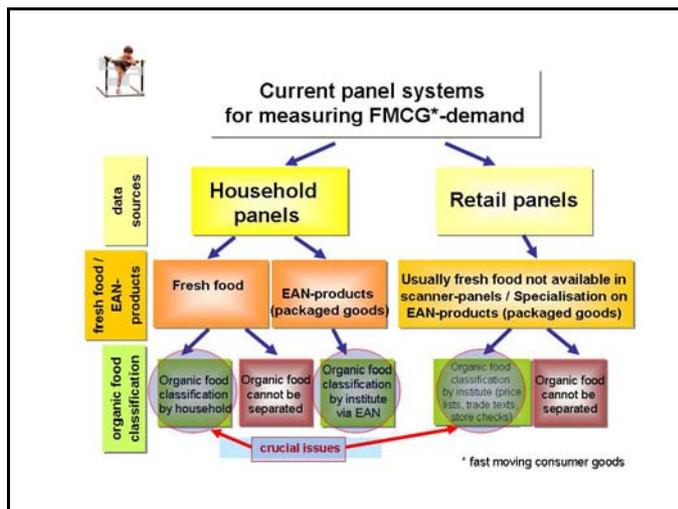
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Results of an International Workshop on European Consumer and Retailer Panel Data for Organic Products in Bonn

Paul Michels¹

<p>Agenda</p> <ul style="list-style-type: none">  <input type="checkbox"/> Existing systems for consumption measurement  <input type="checkbox"/> Need of the EU Commission  <input type="checkbox"/> Problematic areas and barriers  <input type="checkbox"/> Goals  <input type="checkbox"/> Recommended actions  <input type="checkbox"/> Timeframe, costs, funding 	<p> Official statistics and commercial market research</p> <table border="1"> <thead> <tr> <th>official statistics</th> <th>commercial market research</th> </tr> </thead> <tbody> <tr> <td> <p>Methods:</p> <ul style="list-style-type: none"> ❖ household budget surveys ❖ supply balance sheets ❖ dietary surveys ❖ (national) consumption surveys ❖ etc. <p>Characteristics:</p> <ul style="list-style-type: none"> ❖ big samples, sometimes complete universe ❖ not detailed, no organic food ❖ late data availability ❖ low costs for users ❖ high costs of data collection and processing </td> <td> <p>Methods:</p> <ul style="list-style-type: none"> ❖ household panels ❖ retailer panels ❖ surveys (diary or ex post) <p>Characteristics:</p> <ul style="list-style-type: none"> ❖ medium samples ❖ detailed, organic food data partially available ❖ quick data availability ❖ high costs for users ❖ high costs for data collection and processing </td> </tr> </tbody> </table>	official statistics	commercial market research	<p>Methods:</p> <ul style="list-style-type: none"> ❖ household budget surveys ❖ supply balance sheets ❖ dietary surveys ❖ (national) consumption surveys ❖ etc. <p>Characteristics:</p> <ul style="list-style-type: none"> ❖ big samples, sometimes complete universe ❖ not detailed, no organic food ❖ late data availability ❖ low costs for users ❖ high costs of data collection and processing 	<p>Methods:</p> <ul style="list-style-type: none"> ❖ household panels ❖ retailer panels ❖ surveys (diary or ex post) <p>Characteristics:</p> <ul style="list-style-type: none"> ❖ medium samples ❖ detailed, organic food data partially available ❖ quick data availability ❖ high costs for users ❖ high costs for data collection and processing
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<p> Why are consumer and retailer panels useful?</p> <p>Provide farmers, politicians and producers with information to better match the needs of costumers</p> <ul style="list-style-type: none"> → e.g. Controlling of political goals (x% organic product until 200Y) → fit of supply and demand of organic products → which segments are interesting for investments? <p>Consumer price information on organic products</p> <p>Support for commercial activities</p> <ul style="list-style-type: none"> → Benchmarking: How is the category trend on total market / organic market compared to my own products? I.e. Am I loosing ore gaining market shares? → How can I prepare myself well for sales talks with retailers? → etc. 	<p> Eurostat Food Safety Project</p> <ul style="list-style-type: none"> → Statistics on food and animal feed at all stages of the chain: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> production <input checked="" type="checkbox"/> processing <input checked="" type="checkbox"/> distribution <input checked="" type="checkbox"/> consumption <input checked="" type="checkbox"/> including type of cultivation method like organic farming / production → Set up a task force in December 2004 on food consumption <ul style="list-style-type: none"> ❖ Results of a Eurostat inquiry on needs for data (spring 2005) <ul style="list-style-type: none"> <input checked="" type="checkbox"/> DG AGRI, DG Environment declared need for data on sales, prices and purchases of households (including data on consumption of organic products) <input checked="" type="checkbox"/> Furthermore: volume of production, availability and intake of food products (general food consumption, organic as part of it) ❖ Possibility of establishing a regular data collection within the EU statistical system is investigated <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Investigation of national institutions on options of establishing or improving data collection on food consumption. Result: There is no unique methodology. <input checked="" type="checkbox"/> Eurostat accepts all kind of statistical sources including private market research panels (provided that national institutions recommend a statistically valid method, an independent source, clear and compatible definitions) 				

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Learnings from workshops in Berlin and Bonn

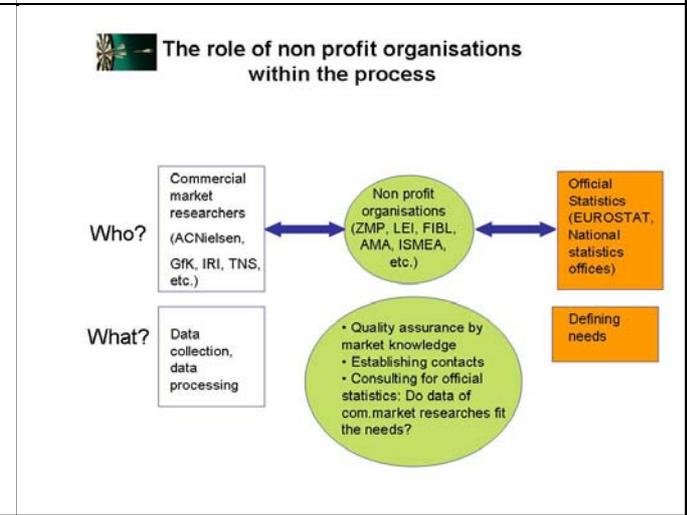
Data on organic consumption from commercial market research institutes are not readily reliable

- Experience shared by ZMP (D), LEI (NL), Le GRET (F), (FIBL (CH)),
- Cooperation of commercial market research institutes and market experts is essential for satisfactory data quality
- Market know how on organic food sector usually is concentrated in non-profit-organizations like ZMP, LEI, AMA, ISMEA, FIBL

Lack of contacts between commercial market research institutes and official statistics

- Definitions of commercial market researchers are built up for the needs of existing and prospective clients and not for official statistics
- There is no convergence in methodology and definitions

- ### 4 Goals
- 1) Get a clear picture which data are available in each country
 - 2) Estimation whether data are reliable to get proxies for (organic) food consumption
 - 3) Bring together official statisticians and national market researchers
 - 4) Establish communication platform for data exchange and best practice in a European working group



- ### Recommended Actions
- In order to reach the goals:
fund a project on EU level (Eurostat or DG AGRI):
- Analyse methodology of commercial and official researchers, countrywise
 - Comparing organic food consumption statistics (absolute values and shares) of commercial market researchers
 - Building up concepts for harmonisation of output (convergence with respect to product group definitions, organic food definition, statistical standards, quality checks)
 - Collecting national data for a rough report on organic consumption
 - Clarifying financial aspects and usage rights of data
 - Establishing contacts between commercial and official data collectors
 - Establish and fund European working group meetings (Quality assurance by market knowledge, consulting, data exchange)

- ### Time, Cost frame, funding
- Cost frame:**
- Install a person (expert level) at Eurostat or DG AGRI for two years
 - Finance 1 month per year and participating country to arrange (set up, description of methodology, output harmonization, etc.)
 - Finance European working group meetings (2 meetings per year with travelling expenses, accommodation) about 30.000 Euro
- Time frame:**
- 2 years pilot phase
- funding**
- EU

Biological Agriculture in the Netherlands: Working Towards Five Percent Organic

Johan Bakker¹ and Arjen Vroegop²

Introduction

This paper contributes to the goals of the European Information Systems for Organic Markets (EISfOM) by presenting 1) a brief introduction to the collection of consumer data on organic food in the Netherlands and 2) the way the data are used to contribute to the work of the Dutch Ministry of Agriculture. By sharing information, the aim of the EISfOM project is to initiate a uniform approach in collecting data and the way this information is used for government policies. This paper is accompanied by the presentation by J.H. Bakker of LEI Wageningen-UR and A.M. Vroegop of the Dutch Ministry of Agriculture, at the 2nd EISfOM European Seminar in Brussels on 10 and 11 November 2005.

1 Collection of Dutch consumer data on organic food

The EKO-Monitor (Organic Monitor)

In order to monitor the development of the organic market, LEI Wageningen-UR, together with the Dutch Ministry of Agriculture, started the EKO-Monitor (Organic Monitor) project three years ago. The original three year contract was renewed for another three years in 2005.

With a target set at five percent organic market share of food consumption¹ the EKO-Monitor project collects data on several market channels and product categories in order to monitor the development of organic products. The data collection in the Netherlands takes place primarily in two ways:

- 1) the Dutch ministry of Agriculture buys data on consumer spending in the retail and discounter supermarkets from commercial market research sources;
- 2) LEI Wageningen-UR collect data from expert sources on consumer spending in specialist shops and other points of sale such as direct sales from organic farms to consumers, sales via the internet and sales through weekly subscription of a shopping bag of organic fruits and vegetables.

Detail level in the data

If the data sources used to monitor organic development differ widely (as is almost always the case), the levels of monitoring must be very clearly defined. The depth of the output is limited by the level of detail of the most aggregated part. If one source brings you up to the level of 'organic bananas' and 'organic lemons' while another source delivers no more detail than 'organic fruit', then 'fruit' is the detail level on which you can report.

In the Netherlands we divide the organic figures into several product groups. Table 1 shows these groups alongside the Dutch market shares of organic consumer spending on 30 June 2005 (*See policy document Organic Agriculture 2005 – 2007 (Biologische Landbouw 2005 – 2007)).

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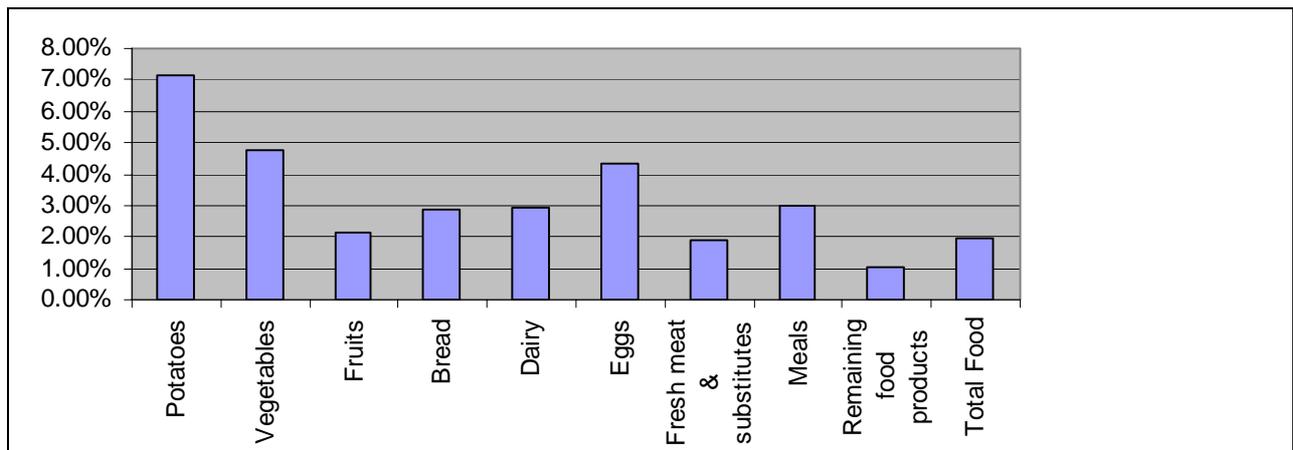


Figure 1: Market share of product categories, 30 June 2005. Source: EKO-Monitor 19 second quarter 2005, www.biologica.nl

Quarterly reports at the detail level shown in Table 1 are made for the media by press releases and through the internet. These figures are only aggregated for the national level and without details of different sale channels, such as retail or specialist shops. Although some data sources provide a more detailed level of information, as explained below, no further detail is presented. The reason for this is that it presents only a part of the data and has to maintain the confidentiality of the commercial parties involved.

Data sources and quality of the information

As for the collection of data and which sources to use, the primary goal of the EKO-Monitor project is to obtain information in as much depth as possible. The secondary goal is to obtain the information as close as possible to the original source. In the different sale channels mentioned above, this results in the following workflow:

The data bought from commercial market research companies is actually on a more detailed level. The sources are Information Resources (IRI) and GfK Consumer panels. Information Resources provides information about Dutch organic consumer spending from scanning data from cash registers in retail outlets in the Netherlands.

GfK Consumer panel uses data from a consumer panel source with some 4'400 households in the Netherlands who register all their purchases on a daily basis. This involves information like source of purchase, price, kind of product, total amount and whether the purchased products are organic or not.

The third source of data is expert interviews. This information is obtained by interviewing several experts and companies who are involved in selling organic products through specialist shops, the internet or through organic markets in the Netherlands. This kind of information is less accurate than the information from IRI and GfK and not at a high level of detail. This is actually the reason why providing more detailed levels in the quarterly reports and media is not possible at this stage of the project.

Because the information is obtained from several different sources with overlapping data, quality checks can be made between the different sets of data. This is one of the major quality checks that take place. Another, second quality check will be explained below in the policy support section.

Initiatives for further improvement

In this section we explain our objectives to obtain a further improvement in the quality of the data sets. In the search for further improvement we have focussed on the sources outside the supermarket chains, particularly on the specialist shops, like natural and health food shops, the farmers who sell organic products directly from their farms, and all kinds of selling initiatives through the internet. There are several reasons for this: the less detailed information we obtain from these sales channels, because it is collected through interviews instead of data sets, is of a lower quality than the IRI and GfK data, and also we would like to find sources that are closer to our two goals in the EKO-Monitor project, as described above.

Therefore we have started a project to outline the market structure of these sales channels, which should result in uniform approach for them. It also includes the introduction of aggregating information from cash register systems in the specialist shops. The aim of this project is to deliver more detailed information on the sales channels mentioned, which is to be included in the next annual report in March/April 2006.

Policy support

All the sections above are focussed on obtaining and presenting data on consumer spending on organic products. As well as calculating and presenting data on the organic market, the EKO-Monitor project also provides policy support through information exchange with experts in the market. As explained below, the Dutch government has installed an expert for every major product category to support promotions and efforts to increase the demand for organic products. The experts initiate promotion campaigns with retail outlets and in order to judge the outcome of these campaigns they need to have specific data for these periods. The EKO-Monitor project provides them with these data. In fact, every quarter there is a meeting to discuss the data from the EKO-Monitor project with all the market experts. By looking at the data and connecting them to the developing situation in the specific market, these experts provide the EKO-Monitor project with an extra quality check on the data. This is achieved by double checking the data with market actors. In this way the project supports the policy of the Dutch government and their market experts in their efforts to increase sales of organic products.

2 Contribution to the work of the Dutch Ministry of Agriculture

Introduction

One objective of the Ministry of Agriculture, Nature and Food Quality (LNV) is to give sustainable organic agriculture a place in society alongside other production systems. Consumers must be given a choice. A central aim of the Organic Agriculture Market Development Programme is to stimulate 'light users' to buy organic products more regularly. A greater supply of organic products is an important part of this initiative: supermarkets need to stock a wide range of organic products.

Context

The policy document *Biologische Landbouw 2005-2007* (Organic Agriculture 2005-2007) outlines the government's efforts to promote organic agriculture. These measures include the stimulation of organic production systems and the distribution of knowledge. An initial agreement regarding the development of the organic agriculture market (1e Convenant Marktontwikkeling Biologische Landbouw (MBL)) has now been followed by a second agreement (2005-2007). The Ministry of LNV, together with five non-governmental partners (supermarkets, banks, farmers' organisations, the catering branch organisation

and the umbrella organisation for organic farming and nutrition) has further elaborated a policy on market expansion of organic agriculture. The contracted partners have established a strategic steering committee and a task force. The task force is charged with developing the market and must stimulate both consumer demand and supermarket demand.

Given that 'light users' rarely shop in health food stores, the object is to increase the supply to supermarkets. The idea is that by 2007 some five percent of food sales should be organic. The purchase of organic products should be a logical trend in the consumption pattern, not only because of the taste but also because consumers wish to make a concrete contribution to a sustainable society.

Effects

The MBL agreement is an important step towards achieving the five percent objective and is also consistent with the principles of the *Andere Overheid* (Modernising Government) policy. Eleven civil society organisations have expressed their enthusiasm by subscribing to relevant parts of the MBL agreement.

A media campaign, raising this issue with chain managers and stimulating planning in the different sectors are all part of the approach.

The five percent objective is directly linked with a ten percent acreage objective. By 2010 some ten percent of all arable land in the Netherlands should be farmed organically.

Tie-in with Ministry policy

In the Netherlands agriculture is under pressure: there is limited space and prices are low. Differentiation based on alternatives and exchange with other countries serves to strengthen the trading position. A major argument for promoting organic - or biological agriculture as we call it - is that it contributes directly to sustainable production systems. It provides an alternative to mainstream farmers who are looking for different markets. It is also an alternative for farmers who are looking for a more balanced way of farming. Balanced, that is, in terms of less capital intensive, less large scale, more natural. Last and not least, consumers should be given a fair choice with regard to biological products.

Particular aspects

The business sector is coming forward with product demonstrations and information for consumers. Related sales channels, such as catering, are also covered. The focus on 'light users' means that all of the large supermarket chains are involved. Long-term plans envisage reducing the cost of organic products by increasing sales. A pilot research project in the form of a pricing experiment will determine whether reducing the price of organic products (so they are on a par with non-organic products) will lead consumers to buy more.

Challenges

Careful positioning is important, otherwise 'organic' will simply be seen as a hype and interest will soon wane. The benefits of organic farming and consumption need to be seen as self-evident rather than as ideal. At the moment only a small percentage of export is organic and this needs to be improved. There needs to be a greater awareness of the possibilities, particularly in Northern Europe and the US. There is profit to be made in the preparation of composite products that contain organic ingredients. However, these possibilities are limited as they risk clouding the issue.

Some details on the Dutch programme for market development of organic agriculture

Emphasis on:

1) Stimulating demand

As mentioned earlier together with five contracted partners we aim at reaching the five percent and ten percent targets.

Activities:

- media campaign
- public and private projects on extension and market promotion
- supply chain managers
- experiment with consumer prices: 'rewarding sustainable consumption'
- practise what you preach: organic catering at the Ministry

2) Knowledge development and dissemination

- public/private joint innovation programmes
- knowledge development and networks
- subsidy for business advice

3) Regional approach

- stimulating local marketing of organic food
- facilitating co-operation with local organisations and local governments
- pilot project in north of the Netherlands (e.g. school milk and fruit project)

4) Rewarding 'green' services

- •certification support for organic farmers in conversion

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Consumption of Organic Food in Spain

Carmen Fuentes Bol¹

Since 1987, the Ministry of Agriculture, Fisheries and Food (M.A.P.A.), has been running a Food Consumption Survey on direct demand for food to illustrate the nutrition of the Spanish people. Sample size has been increased each year to achieve better accuracy in the results. In this study, we have collected purchases from households and from commercial and social institutions. Currently, 6'000 homes give us their daily purchases, 365 days per year and data is processed monthly. Also, 840 hotels, restaurants, bars and cafeterias and 230 social institutions (hospitals, schools, prisons, etc.) give us their monthly purchases throughout the year. All data is processed by quarterly.

The consultant TNS is responsible for the household panel and SIGMA DOS for the commercial institutions .

The breakdown of population for the household data is as follows:

Geographic: the 17 autonomous communities

- Catalonia
- Aragon
- Balearic Islands
- Valencia
- Murcia
- Andalusia
- Madrid
- Castilla La Mancha
- Extremadura
- Castilla Leon
- Galicia
- Asturias
- Cantabria
- Basque Country
- Rioja
- Navarra
- Canary Islands

City size:

- < 2'000 inhabitants
- 2'000 – 10'000 inhabitants
- 10'001 – 100'000 inhabitants
- 100'001 – 500'000 inhabitants

¹ Ministry of Agriculture, Food and Fisheries, MAPA, Paeso Infanta Isabel 1, '28071 Madrid, Spain

- > 500'000 inhabitants
- Metropolitan Areas

Socio-economic status:

- Lower class
- Middle-lower
- Middle
- Upper

Number of members of the household:

- 1 person
- 2 people
- 3 people
- 4 people
- 5 or more people

Age of housewife

- <35 years old
- 35 - 49 years old
- 50 - 64 years old
- 65 and over

Working housewife

- Housewife who works exclusively inside the household
- Housewife who works outside the household

Children in the household

- Household with children of less than six years old.
- Household with children between 6 - 15 years old
- Household without children

Life cycle TNS

- Retired
- Single adults
- Married couples
- Single parent
- Household with offspring of 17 years and older
- Household with children between 7 - 17 years old
- Household with children under seven years old
- Young couple
- Single youth

Also, the household data give us the place of purchase

- Shop
- Supermarket
- Hypermarket
- Street market
- Home-delivered service
- Home-grown products
- Wholesale
- Cooperative

For the household panel we collect purchases within 40 major groups divided into 450 categories. Whenever the household makes a purchase of an item for domestic consumption, it is registered using an optical reader that scans the product barcode. This barcode can be found in the normal packaging or can be obtained from a barcode book that is available for bulk purchases of products. This optical reader is connected to the TNS computer and the data thus registered are subsequently used for computerised analysis.

Data has been gathered organic food consumption in the household panel since 2003. We have chosen three principal food groups: fresh vegetables, fresh fruits and olive oil. The main difficulty here is the lack of a specific barcode for organic products, as they only have a characteristic label. It is important to emphasize that the Spanish population is broadly ignorant of what can be called organic food. Many housewives think that they are buying organic products because they know the producer. They believe that since they are living in small cities, then everything that is cultivated with care and without any pesticides or fertilisers, etc should be organic. All the products which are not subject to the necessary controls cannot be defined as organic, but our source of information is not really aware of this specific issue, even though the surveyors insist that only those which display the proper label should be recorded as organic.

Our results on the average national consumption of organic products with respect to normal products did not seem to fit with our knowledge of the reality. We decided therefore that the data coming from large cities and metropolitan areas was more accurate. The large deviation in small cities with a bigger percentage of organic product consumption did not seem to be a logical result. Because of this we calculated the average percentage of organic product consumption in total consumption for different demographic types (metropolitan areas and cities with more the 500'000 people). Then we extrapolated this percentage to the total national consumption.

The data obtained from the MAPA consumption panel is as follows:

Percentage of organic products purchased per household with respect to the total for each group (%)			
Category	2003	2004	1 st semester 2005
Organic fresh vegetables	3.4	4.8	4.7
Organic fresh fruit	3.1	4.2	4.5
Organic olive oil	0.01	0.09	0.17

Organic product consumption (Tonnes)			
Category	2003	2004	1 st semester 2005
Organic fresh vegetables	77'838	113'232	53'788
Organic fresh fruit	115'518	163'939	84'125
Organic olive oil	42	105	97

This implies that although the consumption of this type of product in Spain represents a small percentage of the total consumption, it is increasing little by little.

In other 'ad hoc' opinion surveys carried out by MAPA for the years 2003 and 2004, we have found that:

- The consumers give a value of 6.5 out of 10 for the fact that products are organic. There are no big differences in the different age groups but the valuation from people in the age group 36 - 50 years old is slightly higher.

According to data from the Consumption and Distribution Observatory, unlike the consumers, the distribution professionals give a value to organic products of 4.0 out of 10. Their opinion on consumers' ideas was that:

- The consumers don't value the organic production system.
- The consumers buy very little of these products.
- The consumers have great ignorance about the meaning of organic.
- Consumers are unwilling to pay the increased price of organic products.

In the 'Study on the knowledge, buying habits and consumption of organics products in Spain' carried out by MAPA in November 2004, the conclusions were:

Non-consuming individuals didn't eat organics products because:

- they were difficult to find (45 percent).
- they didn't know enough about them (37 percent).
- the organic products were expensive (31 percent).
- there was very little product variety (12 percent).
- they had little confidence that products labelled organic were really organic (11 percent)

According to the Consumption Barometer of the Eroski Group Foundation, the consumption of organics is more frequent for men than for women and increases clearly in proportion to socio-economic status.

In conclusion, although in some surveys the consumers claim to know and to buy organic products, the reality is that people have a general ignorance about these products and the consumption data proves that it is still very low, less than five percent of the total products. Yet, a tendency to increase their consumption has been seen recently.

In summary, we hope to increase the demand for products that are environmental friendly in the near future. The MAPA must make more effort to promote and inform about the properties and the methods of organic production. In this sense we are working to increase our knowledge of the eating habits of the consumers, as well as the problems related to commercial distribution (poor product rotation, lack of knowledge, etc.). The aim is to establish specific strategies to bring together consumer demand with the resources and their distribution.

Consumer and Retail Panel Data for Organic Foods: the German ‘Puzzle Approach’

Barbara Bien¹

Introduction

The aim of the project is to measure the development of the demand for organic foods in Germany. This project is funded by the federal program for organic farming (BÖL), the CMA and the ZMP. Within the project a reporting system is being developed to quantify consumer demand; this will contain the most important product groups and distribution channels. Data on fresh foods like vegetables, bread, eggs etc. are collected by the household panel of the GfK. Data of an assortment of foods with EAN bar code is received from the retail panels of ACNielsen and bioVista (Figure 1). ZMP organises the process, examines the data quality, develops methods to classify organic fresh foods and combines the multiple sources.

Continuous observation of organic food demand: The puzzle approach of ZMP/CMA						
	Multiple Retailers	Organic shops	Bakeries, butchers	Weekly markets	Farmers	Drug discounter Beverage stores
Fresh food, not packed	GfK	GfK	GfK	GfK	GfK	GfK not important classified as “others”
Products with EAN-bar code	ACNielsen	bioVista	not important			ACNielsen included if needed
Estimated coverage: two third of the purchases of organic food						

Figure 1: Continuous observation of organic food demand: the puzzle approach of ZMP/CMA

- GfK consumer panel: 13'000 households record their daily fresh foods purchases using electronic diary technology. Based on this sample the buying behaviour of 36.6 million private households is extrapolated, excluding the out-of-home-consumption and the demand of the food service sector.
 - ▶ Facts: volumes, sales, prices, penetration, purchase frequencies, loyalty, purchaser characteristics and behaviour, etc.
- ACNielsen retail panel: ACNielsen evaluates the scanner data of approximately 750 multiple retailers. If needed, drug discounter and beverage stores are included. From this the complete demand is projected for German retail universe (excluding ALDI).
 - ▶ Facts: sales, volume, market shares, prices, distribution by product segments, regions and store types

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- **BioVista retail panel:** organic food shops and supermarkets with scanner registers transmit their data to bioVista. The sample currently contains about 100 stores. Data collection started in January 2004.
 - ▶ Facts: sales, volume and prices

Thus the demand for organic products becomes more transparent for all stakeholders in the organic marketing chains (farmers, politicians and producers).

On this basis opportunities and risks for investment can be better judged and the market for organic products will be developed more efficiently. Manufacturers and traders can benchmark their business development with the trends in the groups of goods. Furthermore the instruments are able to provide brand specific information.

Special problems faced when collecting panel data on the demand for organic food

The peculiarities of every panel (the three 'pieces of jigsaw puzzle') when checking, evaluating and analysing data cause some difficulties in setting up a reporting system. The following gives an overview of special problems and solutions for the three panel providers bioVista, ACNielsen and GfK.

1 BioVista retail panel

BioVista collects information from scanner registers in organic food shops. All products provided with an EAN code are included and analysed. Since it is mainly the organic supermarkets and bigger organic food shops which use scanning technology, the traditional small wholefood shops without those registers are under-represented. The average sales in stores in the bioVista panel are approximately one-third higher than an average organic food store. Nevertheless, bioVista is able to project the total market from its data. BioVista receives sales figures from several manufactures and uses them as a reference unit. By comparing the total sales with the panel sales figures they calculate the proportion of the total market they cover and thus are able to project the total market for all products.

Since the panels of **ACNielsen** and **GfK** do not collect data on organic products exclusively, these have to be classified manually, and this carries the risk of confusion between organic and conventional products. The main problem is the relatively small size of the organic market in comparison to the conventional market. If even a small percentage of conventional market data is entered in the database as 'organic' in error, this could lead to a disproportionately high overestimate for the total organic market.

2 ACNielsen retail panel

The retail panel from ACNielsen collects data from products with EAN codes in supermarkets and other food stores. The EAN code does not contain information about organic production and organic is not a standard characteristic reported in the data bank of ACNielsen. Therefore, follow-up identification is required using trade information from producers, in-store observations and so forth. For the product groups under consideration we obtain quarterly data on total sales. In addition to the total sales we also receive brand specific data (without permission to publish) in exchange for validation of this data by the ZMP market experts. We check not only whether conventional products are included in error, but also whether organic products/brands are missing and whether marked fluctuations for single products and brands occur. On the basis of the results, data may need to be re-worked by ACNielsen.

3 GfK household panel

The participants in the GfK household panel collect and enter their purchases via in-house scanning. Products with EAN are identified by GfK, but most fresh products in Germany do not have bar codes. In this case the scanner dialogue asks whether the product is organic or not organic and the classification is

left to the household members. To some extent panellists confuse product characteristics when they input the data and, because of the low percentage of reported organic purchases in the panel, there is a risk of overestimating the market size and/or recording unrealistic prices. Therefore ZMP validates GfK data against their price information. Entries with prices falling below certain minimum price levels (MLP) are not accepted as organic goods. The two examples below demonstrate how these minimum price levels are defined.

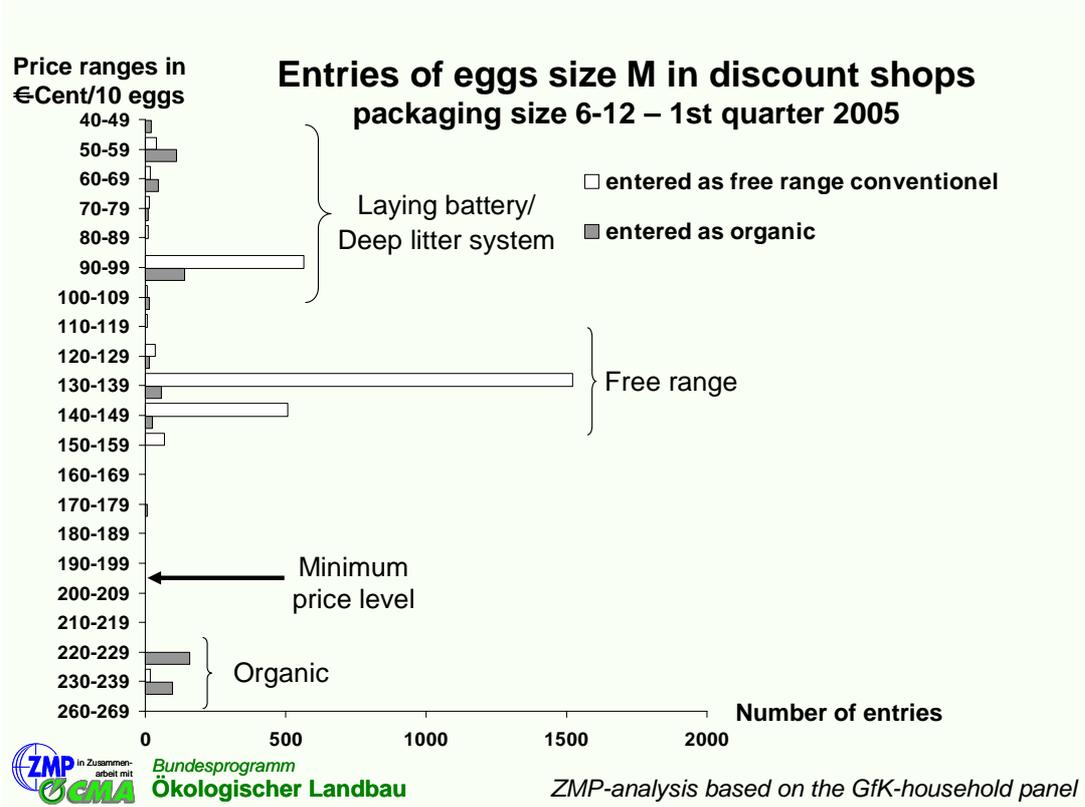


Figure 2: Defining the minimum price level in the egg market

The egg market in discount shops is clearly structured and consistent and therefore we know the prices for the different qualities. To some extent panellists wrongly classify eggs from laying batteries and deep litter systems as free range eggs and conventional as organically produced eggs (Figure 2). From our knowledge of the market we can determine a minimum price level for organic eggs in order to exclude false entries.

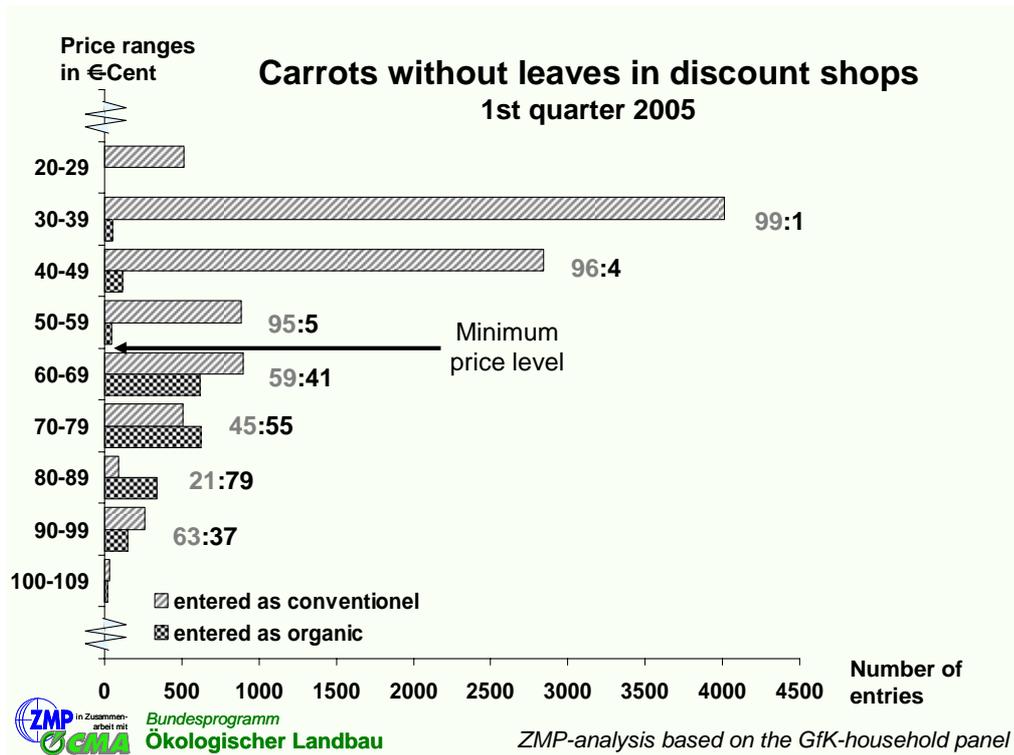


Figure 3: Defining the minimum price level for carrots

Generally price differences between organic and conventional fresh food are not as large for carrots as they are for eggs. Prices may overlap because of special offers or the commercial grade etc. In this case we use the ratio of organic to conventional product prices as an indicator for setting minimum price levels (Figure 3).

For this method in particular expert market knowledge of is essential.

Since special offers on organic products may be below the minimum price levels, these products would not be included. Therefore, ZMP receives a weekly data from Drotax GmbH containing special offers from advertisement leaflets in the daily press and circulars. When promotion prices fall below the minimum price level we will admit this price for the trade chain which has advertised it.

As this procedure is complex and time-consuming we only revise products where there are a significant number of cases. For all other products we use an automatic solution.

European Consumer Panel Reporting of Organics

Elizabeth May¹

Problems / Aims

In line with the objectives set out by the (EISfOM) and the participants of the European Union, it has been stated that there is a requirement for consistent and accurate reporting on the market and consumer trends of the organics market across Europe.

Europanel operates consumer panels in 49 countries globally and 24 European countries. Adopting a similar methodology and consistent reporting template across countries, insights can be gathered on a harmonised dataset to represent the organics market and these requirements.

Methodology

Europanel provides consumer knowledge, from market sizes to shares and the underlying consumer behaviour trends, via its consumer panels. Purchasing behaviour is reported on a bi-weekly basis by our panel members, which is then weighted to represent those products bought by the household population. Each panel is demographically representative and reports accurately within each period and across time. Western European countries report via a scanning methodology and other European countries adopt a pen/paper diary methodology.

Results

The measurement of 'organics' is already available in many European countries and can be set up in other countries. A full alignment of reporting specifications will be required, however it is envisaged that a reporting facility via Europanel will achieve the needs of the EISfOM project and its members. Reporting can be made available within a matter of a few months for those countries where 'organics' is already measured and within 6-9 months in newly reporting countries.

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Information on Trade in Organic Products – The International Agency Point of View

Alexander Kasterine¹

The International Trade Centre (ITC) is a UN agency funded by UNCTAD and WTO providing trade-related technical assistance to small and medium enterprises (SMEs) in developing countries. Within its Market Development Section, the ITC runs the Organic Trade Facilitation Programme, the objective of which is to facilitate SMEs and cooperatives in developing countries in their efforts to export regionally and internationally.

This objective is supported by two main programmes –

1. Market information
2. Training and technical advice

In terms of market information ITC has published market surveys on the state of the organic market in the major developed market (e.g. Kortbech Olesen 2001). Since the programme was re-initiated in March 2005, ITC, in collaboration with various partners, has begun two research projects in this sphere:

- The market potential for organic products from East Africa
- Production and marketing of organic products collected in the wild

This presentation will:

- Describe the perspective of developing country exporters in terms of the need for market information from the EU
- Outline the main objectives of the studies and the methodologies used – given the absence of official data, the latter relies principally upon interviews with certification agencies, exporters and importers.

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Group 5: Supply Balances and International Trade

Coordinator / Chairperson: Ulrich Hamm¹

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The Need for Data from the Viewpoint of Policy Makers

Peter Crofts¹

I have been asked to speak on the subject 'the need for data from the viewpoint of policy makers'. It is challenging to be asked this because, to be honest, I'd never asked myself that question before in quite those terms, despite having worked for over 40 years in the Department for Environment, Food and Rural Affairs and before that the Ministry of Agriculture.

When I first saw the title of this talk, it had come out in the email as 'what politicians want'. I mentioned that to one of our Ministers who agreed it would be an interesting question, but made a face that implied he did not know what the answer was!

But I think – at one level – what politicians and policy makers want from statisticians is much the same. We want big headline statistics that make a point everyone can understand. Often we don't need to be very subtle. We use figures in a way which, no doubt, makes our statisticians wince! Like Neanderthals with a club, we use the figures to crush the opposition.

I am fond of saying, for example, that since 1997 the area of land farmed organically in the UK has increased by thirteen times (from 50'798 hectares to over 690'000 hectares today), and it's true – a great headline figure. But it totally ignores the quality of the land in question. Is it first class agricultural land in the East of England, or scenically attractive but not very productive bog and rock half way up a mountain in the North of Scotland? I just don't know and sometimes, as a policy maker, I don't care.

Another figure I love to quote (and more on this later) is the significant increase in the amount of consumer demand for organic food met by UK farmers – up from 30 percent in 2002 to 62 percent now for the types of products that can be grown in the UK. Here, I have to confess, I'm not quite so sure just how accurate this figure is, precisely, but it does seem clear there has been a good increase and that is what I want to get across to my audience.

My audience? Yes, I suppose there is an audience. It is one thing making policy, but often it is necessary to convince a range of stakeholders that what you are doing is the correct course of action. You need to convince the public, your Treasury Department, perhaps even Parliament and the European Commission that your proposal whatever it might be is soundly based and, once it's in place, it is beginning to show results.

This is where the need for data begins to get more subtle. I mentioned the 'big statistic' approach earlier, and often it is enough, especially at the start of a policy. But as the policy and the market that goes with it begins to mature, we begin to see a need for better data, much more subtle and sensitive than hitherto.

Here are some areas in which I'd like to see improvement especially:

Production

As I mentioned earlier, the simple land-based measure of production was good to start with, but it is no longer enough. As policy makers we are seized with the fact that organic farming has environmental

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advantages and from many points of view it would be good to have more of it. Indeed this is the basis of our Organic Entry Level Scheme in England.

However, as a policy progresses, other questions begin to be asked. Are we growing enough cereals to feed the stock we have (non-ruminants of course!). Dairy production was in surplus, but now, thanks to positive publicity about organic milk, there is a shortage. What are the prospects of reversing that? Are we really nearly unable to grow organic onions in the UK? How many hectares do we have?

Is our policy of encouraging organic farming as an environmental good having any perverse effect on the production base? What are people growing?

Imports

This has been quite a big issue for us. When the UK published its first Organic Action Plan in 2002, one of its main action points was to relate organic farming to consumption. Since at the time the UK had an extraordinarily high level of imports of organic products – only 30 percent being supplied by UK farmers – we wanted to increase that figure to 70 percent, more in line with the production of non-organic indigenous-type foods. It is certainly not a case of keeping out imports – we are a trading nation and always have been – but there was a serious imbalance not reflected in the conventional food market.

The question is how do we measure it? The answer is ‘not very easily and probably not very well’. Our friends at the Soil Association tell me that 62 percent is now UK-supplied and I’m very grateful to have their figure, but I think they would agree that it is not very robust and is arrived at from a number of different sources.

What I’d love to see is much better import data. The ideal would be to have an organic customs tariff – but of course the experts have pointed out to me that this means doubling the codes, increasing expense and bureaucracy – quite the opposite of the way government is going at the moment.

Exports

To be honest, exports are not such a major concern for us in the UK, but I know there are successes – for instance, a small muesli manufacturer who exports to Japan. I know very little about organic exports, but it would be good to know more. In fact, we might be doing rather better than I think. Again, it might come down to customs codes so the same sort of consideration would apply as for imports.

Consumption

There’s a whole raft of interesting questions here. There is the bigger picture of how farour production meets consumer demand. And then there are social issues – what is the profile of the organic consumer, what is their motivation? Are they, in keeping with our policy, purchasing organic food because they think it’s good for the environment (possibly not!), or are there other reasons? Are there consumers who would like organic food but cannot get it because of cost or where they live? Some of this, I know, begins to move away from pure statistics, but it would be good to have a better appreciation of those issues.

I am not a statistician and I’ve always been in deep admiration of the job you do.

A key skill must be to anticipate what data people want before they know they want it!

Another skill (though not always apparent) is to present statistics in a way that the humble administrator, politician or member of the public can easily appreciate and use, even if the information is essentially complex.

At the same time it is important for the statistician to support a particular sector, such as organic food and farming, without smothering it with form filling and demands for information. In the UK, for instance, we do place a big demand upon our organic certifiers to provide us with information. This has grown from simply asking for a list of operators 15 years ago, to demanding now all the information required in the annual return for the Commission.

As statisticians, you do have a huge challenge before you. I do hope that my remarks today will give just a little insight into what policy makers want and that it will help us to achieve – something I'm sure we all desire – the growth of organic food and farming in Europe.

Need for Data from the Viewpoint of Policy Makers: A Third Country Perspective

Juan Carlos Ramírez¹ and Nora Liliana Puppi²

Introduction

The Argentine rural area, as well as rural areas in other developing countries in Latin America and the Caribbean, is involved in a global economy. In that context, where international trade is managed on a worldwide basis, information and communication issues are very important. Therefore, having an accurate information technology system that allows access to reliable and timely information will result not only in improving communication amongst the agents but will also be a valuable tool for planning and developing the right social development and environmental policies.

During the last decade the Argentinian agricultural export sector has achieved an important increase in production levels. This competitiveness is based on the production of commodities, where grains such as soybean are widely cultivated. As a result of this, not only has better welfare become more widespread in rural areas but also unwanted social and environmental issues have occurred as by products. For example, migration from rural areas to urban areas has been noticeable and environmentally unfriendly and non-sustainable management, together with deforestation, are taking place.

In this context organic agriculture appears to be a reasonable solution for such problems. Firstly, it can improve level of employment in rural areas and secondly can increase the share of small farmers in the agri-food system, and finally underpinning both, aid in the development process and welfare generation. Therefore, organic agriculture has been adopted as a goal by both the federal and local governments.

An Integral Promotion Programme for Organic Production was set up by the Federal Government in 2001. Its purposes are:

- To promote the integral development of organic production all over the country.
- To strengthen the competitive advantages that Argentina enjoys.
- To promote production and marketing activities.
- To increase the share of small farms on the market.
- To strengthen both the control system by the competent authority and consumer trust.
- To provide proper financial access to organic farmers.

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Perspectives of developing exporter countries

Organic agriculture began in Argentina at the end of the 1980s. Since then, and throughout last decade, it has had strong and steady growth. The increase has been due to both the regulatory context and the control system according to international regulations.

Having taken into account a clear perspective of the situation of the international organic food market, Argentina has developed an efficient control system which allows the country to experience this growth. It has also brought a new market advantage to the sector.

According to accurate data sources, there are now almost 44'000 ha being farmed organically and 2.4 million organic livestock, involving approximately 1'800 farms. The main target of the production system is the international market, principally the European Union.

In the beginning, grains, oilseeds and fruits were the principal exports but by now other product varieties are exported, with fruits, vegetables and manufactured products at the top of the list.

The main food exports are grains, oilseeds, fruits and manufactured products. In 2004, 45 percent of grains and oilseeds, 80 percent of fruits, 97 percent of vegetables and 70 percent of manufactured products were exported to the European Union. This means that Argentina has been an important and reliable supplier for the European Union during the last ten years. It has to be considered that Argentina produces in counter season, and therefore is able to produce a great variety of products for European consumers.

The role of information in the design of policies in the development of organic production

The availability of an information system for the European organic sector will greatly assist policy makers in preparing development policies. Specific, reliable and timely market information will throw light on the system and help overcome market uncertainty and will assist the actors in their decision-making. Hence, market information will provide an input to:

a) Technology Policies

To design technology policies in order to:

- Develop and disseminate accurate agronomic technologies that will allow us to link different regional backgrounds, i.e. differing cultural, social and environmental realities, with organic production. These new innovative technologies will concern aspects such as sustainability and social and economic issues. From the point of view of sustainability, good practice in soil conservation, proper crop rotation and appropriate inputs to the production system appear to be the biggest issues. From the social viewpoint, technologies which will increase the share of family businesses and small farmers are the most important. Finally, the economic consequences of these new technologies should not mitigate against the natural development of individuals or society as a whole.

This will also help us to develop proper research and development programmes for each stage of production, i.e. relating to soil preparation, fertilisers, environmental conservation, industrial processes, marketing aspects, integration of both producers and industry, etc.

This will promote the development of new products, increasing their value with the result that the whole system will be more profitable.

b) Finance programmes

Financial conditions will be put in place which both support the process of conversion from conventional agriculture to organic agriculture and encourage new investments in order to maintain or augment the economic structure of the organic production.

Another important issue is the development of financial programmes for all kinds of farmers. Producers must have financial support measures to help them, not only in the export market but also to introduce them in the domestic organic market.

c) Associative promotion

It is well known that it is not easy for farmers to export by themselves because of the scale of their production. This kind of programme will support them in order to achieve a scale to enable them to export by themselves. This issue can only be addressed through integrated promotion programmes. The programmes themselves must address aspects such as vertical and horizontal linkages, to achieve an adequate economic frame and to link supply to demand.

d) Marketing and promotion programmes

There are three major elements here:

- encouraging farmers to participate in exhibitions, agri-business meetings, etc
- giving support with the logistical problems of meeting demand at the right time and reaching the market in suitable condition and appropriate volumes.
- providing financial support for new exporters to introduce them into the global market.

On the other hand, Argentina has an advantage as exporter, which is the quality of its products. These marketing and promotion programmes must take account of this advantage. This could enable us to develop our own country brand 'Argentine Food' which would permit the whole world to re-evaluate the quality of Argentinian organic food.

Product promotion should also be encouraged by the use of modern technology and the means of communication available, such as the internet and the creation of web pages and forums to exchange information.

e) Training and dissemination programmes

These should be designed to spread the concepts of organic agriculture which will, in turn, increase the number of operators in the system. Thus actors will be able to know and practice the principles of organic production not only as a new way of production but also as a new philosophy of life and agri-business.

f) Control System

Market information is very important for planning controls. The control budget is related to the number of farmers and the volume of production,

Conclusion

If timely and reliable European market information were available by product day-to-day, this would allow our country and other third exporting countries to:

- improve the decision-making process carried out by policy makers
- plan the future development of organic production
- obtain the kind of products required by the demand.
- improve the resources assigned

The information system would also contribute to improving the organic agricultural production, minimise the unwanted effects of conventional agricultural production and help to generate wealth.

Organic Trade Association Perspective A Questionnaire for Scientists and Statisticians

Conrad Thimm¹

1 Abstract: The tables are turned

Organic trade does not need data from scientists and statisticians. Scientists, statisticians, and decision makers need to learn from traders. If the core purpose is to develop organic markets, a change of perspective is needed. A questionnaire for scientists and statisticians is presented as one learning tool. The result is open and the process may continue.

2 Problem: The Gap

Asking my colleagues in the IFOAM Organic Trade Forum or other business people about their need for data from science or administration is a turn off. Immediate reactions are:

- 'Questionnaires with no relevance to business, a waste of time'
- 'Getting no feedback, or so late that for day-to-day business it is like never'
- 'Boring presentations with little meaning and even less relevance for business'

Yet there are many examples of market data being used successfully in business. At the EISfOM Seminar in 2004 I described some key ingredients for success (Thimm, 2004). This paper is still fully applicable but seems to have had no influence on the course of events. So, instead of repeating myself, in this presentation I go wholeheartedly for the core of the problem:

Scientists and administrators live in worlds far removed from organic trade and have no common experience, no common language and no common purpose. They simply do not understand each other.

It is a myth that organic traders make decisions based on publicly available data. These data may be useful for politics, media, publicity but no-one would base a serious business decision on them. These decisions are based on experience and intuition and internal data from one's own company, suppliers, customers, and market talk. When the business grows, commercial market research is added from sources which serve traders directly.

Organic traders do not see a need for EISfOM and if public money is spent on it, it is seen to be spent for politics, publicity and public institutions but not for the development of organic markets, a completely different task accomplished by the traders themselves.

3 Methodology: Questions instead of answers

I could accept that this is the situation and then I would not have to come to present this at all. Which is what traders do, or rather, do not do. But I have not given up trying to bridge worlds for sustainable development and believe that there are scientists and statisticians who want to learn and change, just as I do.

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I know, talking and writing alone do not help. Information overflow prevents any lasting intake. The only way to change is to get people moving physically, emotionally and mentally. This applies here just as much as in any cultural conflict. And there are tools and strategies to facilitate continuous learning and change in individuals and organisations (Williams, 2004). These tools and strategies are needed not only for scientists and statisticians but in particular for decision makers who are responsible for allocating funds.

The resources required to create an open space for learning in this presentation are rather limited and therefore I am using the basic tool of posing questions instead of providing answers. Searching as an individual for answers, both separately and in the company of others, supports learning much more effectively than any presentation of solutions anyway and, as it happens, I do not have the answers.

So, the Organic Trade Empire strikes back with a questionnaire that scientists and statisticians may care to work through, if they like. If they do not, that's fine, too. Learning takes place only where one's passion lies. When you cannot learn or contribute anything new, you had better go somewhere else, as the law of two feet in Open Space Technology declares (Owen, 1997).

4 A questionnaire for scientists and statisticians

Anyone involved in generating organic market information may answer the following questions on any project for him/herself individually, and possibly in a team or mixed group which adds to the liveliness and variety in perspectives. The questionnaire is to be worked through by this group for their own learning experience. Market actors should answer the questionnaire only if they themselves desire to do so. Market actors in this context may include any actor from farmer, via processor and trader, to consumer. Relevant market actors should be specified in each project market actors.

Most of the questions may be taken for granted for any project proposal. Yet, I suggest that the usual answers should be challenged. Are they really true? Do they stand up to cross examination?

a) Understanding the System?

Have I, and everyone else involved in the project, understood the system of the market to be studied? Do I know the major players? Their background? Their situation? Their vision? Do I know the goods traded? Their characteristics? Varieties? Standards? Supply chains? Origins? Do I know the market place? The customers? Their expectations? Marketing? Acquisition? Competition? Collaboration? Taxes? Public funding? ...

The terms 'relevant, timely, reliable, comprehensive' defining the data quality aimed at in the EISfOM project, as set out in the introduction to the 1st EISfOM European Seminar last year in Berlin (Lampkin, 2004) provide an appropriate structure for questions those involved in projects on data may ask themselves.

b) Relevant?

Is the purpose of the project relevant to market actors? How do I know? Have I spoken to some of them about it? Have I asked them? Do I know from publications? Was it a clear message by a market actor or what somebody assumed? What are my own assumptions? And how do I check against the view of market actors?

Are the possible results of the project relevant to market actors? Can the relevance be improved? How? Are actors, for whom the results may be relevant, kept informed and made aware of them specifically? Are the results published in a short and simple form which is easily understood by market actors, or only in the jargon of scientists and statisticians? Can the distribution of the results be improved?

c) Timely?

Can the results of a project be presented in a timely way? What does timely mean to market actors in the specific category? Six months? Four weeks? Two days? Or is the only relevant information about the future anyway? If presentation of the results takes more than four weeks, what preliminary feedback can be given?

d) Reliable?

What are reliable data in a living and quickly changing context? Who would rely on them? For which purpose? What happens if data turn out to be not reliable? Are the circumstances for reliability of data clear? Are they clearly communicated?

e) Comprehensive?

What does comprehensive mean in the specific project? In a global market? On different levels of supply chains? Where is comprehensiveness relevant? Possible in a timely way? And still being somewhat reliable?

5 Results: Open and the Process can Continue

The presentation of the results adds to the learning of those involved in the process. The content of the answers to this questionnaire is open. It may or may not be significant. But the process of answering as truthfully as possible may facilitate a development from understanding to participation to collaboration for a common purpose amongst scientists, statisticians, decision makers and traders.

That is not an easy task and includes a change of paradigm. But it is vital and in line with a process of increased participation and collaboration for the whole of society to adapt to change. Luckily there are many other and more effective tools and strategies to facilitate this process and more and more organisations are picking them up.

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Stakeholder Perspectives on Organic Food Supply Balances and International Trade Data

Alexander Gerber¹

Reveal and conceal: introduction

When it comes to statistics, what you get is not always what you need, and sometimes what you are offered can create more problems than solutions. From the viewpoint of the organic food industry, there are two fundamental questions that must be asked concerning statistics on supply balances and international trade of organic food:

- On the one hand much data on the organic food industry as a whole is being collected, but does it provide the necessary information?
- On the other hand, while the organic food industry and its related companies need aggregate data, there is also data that the firms and their related associations want to control and which they have no interest in having published as part of a complete statistical collection.

In this presentation I want to try to bring a little clarity to the sometimes tense situation that exists within and between these two questions. Finally I want to address a further key question: that concerning the cost and outcome of statistical surveys.

Concentration and sufficiency: stakeholders view

According to Hamm's work (2004), statistical market data on the organic food industry fulfils two basic functions. Firstly it serves market participants and investors as an aid in making company decisions, and secondly it helps in estimations of the economic effects of the market, thus offering a basis for policy assessments and conclusions at stakeholder and decision-making levels.

This describes a first pair of contradictions. While for the formulation of political demands and decision-making – accompanied by public information – transparency and accessibility of statistical data are indispensable prerequisites, companies facing competition often have no interest in a complete presentation of the available data.

To put it another way, while on the one hand complete, reliable and current statistical data should be collected and made available, for the companies involved and their associations there is a certain demand for sovereignty, thus the selective use of data that is considered confidential. This concerns the content as well as the timing of the publication of data. Specifically this means that through the exclusive survey of particular market data – for example the development of turnover of particular product lines – competitive advantages could be generated and used in a targeted fashion.

At the same time, I want at this point to play down the importance of statistical data in companies' decision-making. Because how is it that successful firms are built? Simply put, to the extent that I, as a producer with products distinguished by their unique features, meet the needs or desires of a particular

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group of customers as closely as possible. Economic activity thus occurs always as direct, and to a certain extent also as individual, interaction between a producer and his customers. In this situation generalised statistical data are of limited usefulness.

An example of this is the statement that, for particular goods, a certain amount of organic products have to be sold as conventional, either because of an excess in supply or deficiencies in distribution. This statement is, however, of little interest or help to a company with mainly local buyers. In this case the producer will be directed by his or her specific, and not the general, situation.

Two conclusions can be drawn from this example. In the first instance, relevant data for companies are more useful the more they are geared to the individual situation of the particular firm in question, and the more current they are. Such data are usually derived by the companies themselves or by their related associations, and are used under their control. Examples of this include market research, customer surveys, research on turnover and its development as well as results of quality control.

Secondly, statistical market data are of interest above all for their evaluation of the market as a whole, and are thus of interest to the relevant associations and political decision makers.

One central question stands before the background presented thus far: which data are needed?

This question is also central because, on the one hand, really important data for the organic food industry are lacking, whilst on the other hand there is a danger of succumbing to the temptation that threatens every scientist and statistician, namely collecting all the data that it is possible to collect, without questioning its relevance. In addition there is the cost factor. Here it is crucial to know when and where the data are to be collected. A lot of data are collected in any case through the certification process and, in principle, are already available.

In this situation it must be made clear who is paying for the data review and availability and who will collate the data. If the data are not recorded through the certification process or some other already established system of collecting statistical data, but rather must be collected at company level, extreme reserve and circumspection is advised. Firms are already groaning under the weight of excessive bureaucracy, and are unable to carry out additional surveys, especially in situations where no immediate use for the information is seen. Relevance, cost and return must also be carefully weighed when it comes to decisions as to which statistical data should be gathered.

The most important data on cultivation, such as areas under cultivation, the number of farms involved and the types of plants grown and animals raised, are all available. In addition, in Germany there is a good amount of basic data available on the economic situation of farms. Here the extent to which harmonisation of data collection is possible for the EU should be examined, following up on recently completed research projects. The same is true when it comes to the question of prices.

In Germany the ZMP (central market and price information service) does an excellent job of collecting product prices although – and this is a considerable deficiency – they collect only the prices of vegetables, fruit, grains, potatoes, milk, meat and eggs, and not for processed products. The description and quantifying of organic retail outlets should be expanded to include processing firms.

To assess the market situation as a whole and draw policy conclusions, the key data for the supply balances and international trade must be known. They are important in making assessments of the regional market situation (production – export + import = consumption) as well as of the competitive situation among individual countries. These data are currently not available in a satisfactory way.

For an example of this we can look at Germany, where there is an organic label which, after simple registration, can be applied to all organic products manufactured in accordance with the EU Regulation

2092/91. This means that not only German products can be labelled as organic but also all imports produced in accordance with the EU Regulation and those containing certified ingredients.

The critique coming from some of those involved is that the organic label encourages the promotion of cheaper import products, thus displacing German raw materials. Although there are many arguments countering this charge, a clear report on this situation simply does not exist. Because the amount of imported organic products is unknown, either as a whole or for products with the German organic label and policy disputes are inevitable.

Data on supply balance and international trade are especially important when it comes to the sensitive area of organic agriculture, for this type of cultivation is not only – as with conventional cultivation – strongly connected to local conditions, but in addition market demands around seasonality and regional origins must be taken into consideration. Data on supply balance and international trade show the broader market with possible over- and underproduction and can diminish prejudices concerning the importance of imports as well as show export possibilities. These create the conditions for correct corporate and political decisions.

In particular the following data are needed:

- produced, imported and exported organic products differentiated by product groups for each member state
- trade channels for different product groups
- turnover of organic products in the Member States

As to questions concerning the methods of data collection, there are more experienced experts in this area than myself. Thus I wish to refer to the reflections of Recke and Hamm (2005) that can be found in this volume, which state basically that current systems such as certification and national statistical collection and Eurostat may be used carefully, thus minimising the need for new data collection systems. However the statistical collection by national and European officials must be differentiated in such a way as to make possible the distinction between organic and conventional goods. If the certification bodies are obliged to prepare and pass on particular data, they must be paid for doing so.

Sensitive, needed and missing data: conclusions

My remarks and observations thus far can be combined into three final conclusions:

- A distinction must be made between sensitive data coming from the firms themselves, or collected at their request, over which these companies have control, and general market data that is of much greater importance for the development of policy and decision-making than for the companies involved.
- The temptation to collect all the data that it is possible to gather should be resisted. What counts is getting the essential information. An exact balance should be aimed for, between gaining meaningful information of significance to the actors involved and the costs of the surveys. To achieve this, existing data collection systems must be used carefully and expanded if necessary. However, the establishment of new systems as well as increased company surveys should be avoided.
- A good foundation of data is available on organic agriculture, the number of organic farms and the types of farms involved, on the prices of plant and animal products and on the situation at point of sale. What is lacking is data on prices for processed products, and on the description and quantity of organic processing firms. Especially lacking is information about the import and export of organic goods.

A resolution of these points would contribute to the positive developments already experienced in the organic food industry and pose a challenge to those already involved.

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Market Supply Balances and International Trade Data for Organic Goods: the viewpoint of the stakeholders

Victor González¹

1 Introduction

Organic markets continue to grow rapidly in many countries as general food retailing chains take on a leading role in marketing organic foods, and international trade in organic goods plays an increasingly relevant role in supplying the most important markets in industrialised countries. The current world market for organic products consists almost exclusively of the European Union (EU), the United States of America (USA) and Japan, with a sales volume of approximately US \$ 13 billion (ITC, 2002), with about 15 percent traded internationally. The annual growth rate was estimated at 20 to 25 percent, becoming an attractive market for Third World countries (FAO, 2002).

Although organic marketing initiatives have been defined by the OMIaRD project (Hamm and Gronefeld, 2004) as 'a co-operation between farmers, processors and traders of organic foods', more and more stakeholders and actors within the organic movement and also a growing number of consumer groups criticise organic products as being merely an organic form of conventional products, as having non-transparent origins, and for being transported **long distances** with an associated excessive use of energy (Hamm and Gronefeld, 2004). These critics wish to go back to the roots of the organic movement, recovering the original still unwritten philosophy. These stakeholder groups prefer to strengthen marketing initiatives where organic foods of local or regional origin are being sold on a regional basis.

2 Organic market data and country balances

Recent studies have delivered some information and data on markets for organic farming at the national and European level. Most of this information refers only to the economic aspects of organic markets. Other information relating to possible better performance of the organic market system in terms of social and environmental does not exist.

A country's organic production is given as the volume of each agricultural commodity harvested or produced at farm level and sold as organic (Hamm and Gronefeld, 2004), which is relevant information especially for policy and decision makers. These data are also relevant for market actors (processors, wholesalers and retailers) in meeting the expanding organic market. For the organic movement itself this kind of data is also necessary to demonstrate the desirability of a move towards organic production and also to give confidence to the farmers starting conversion (Hamm and Gronefeld, 2004).

On the other hand, the **country's organic consumption** is the volume of organic produce consumed as such within the country, i.e. these data show how much of the volume of the organic production is sold as organic and also how much was diverted into conventional markets (Hamm and Gronefeld, 2004). With these data we are concerned with the level of underlying demand for a particular product within a country. This kind of data is also relevant for the kind of stakeholders mentioned before, especially for

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policy makers and market regulatory institutions. This kind of indicator can also give some indirect information regarding the degree of recognition of individual national labels for organic food.

It is also essential to know whether the organic produce sold as organic has been absorbed by the domestic market or not, and for this purpose we also need to gather organic export data. In that way we could know whether the domestic market exceeds the country's ability to produce.

For national organic import and export data, some indicators based on the sale of goods as raw products (i.e. unprocessed commodities to avoid the difficulties of processed products combining national and imported goods to add value and export finished products, and of transport hubs or in-transit countries) have been calculated by the OMIaRD project (Hamm and Gronefeld, 2004). One interesting indicator is the 'organic exports as a share of domestic organic production (sold as organic)' which shows the percentage of all organic sales diverted into exports as opposed to being sold on the domestic market. This information, as we will discuss later, is very helpful for different stakeholder groups influencing policies.

In Table 1 we have listed all the relevant indicators for adequate organic market data. All these indicators are important and needed for several stakeholders groups but some of the data is difficult to gather, and in the context of a lack of resources, it is necessary to prioritise the data gathering and decide how often we really need this information.

Table 1. National organic market data for supply and demand balances

Topics	Indicators	Derived information
Organic production	Total organic area by crop Number and size of organic farming enterprises Government support for organic farming Organic production by volume Organic animal feed	Average annual growth rates Total organic area as % of total UAA Organic production as a share of total production Share of organic products sold as organic
Organic consumption	Volume of organic plant and animal consumption Turnover of organic food market	Share of total consumption that is made up of organic consumption
Organic import and exports	Organic imports by volume Organic exports by volume	Organic imports as share of organic human consumption Share of organic exports of domestic organic production Foreign trade in organic products

For organic consumption, we also need regular information regarding the sales channels for organic food, common labels and buying motives for organic food.

As can be seen, since organic markets have a special dimension which relates to the protection of the environment and influencing social fairness, we also need other data which measure the different impact of this economic activity in relation to the conventional market.

3 Organic international trade

Once the infrastructure for certification and market channels has been put in place, many developing countries have seen a great export potential, due the fact that the conversion to organic farming entails no major changes in agricultural practice for the large number of farmers who, for lack of funds or other reasons, use little chemical input.

There is also a common and not always fair perception that rising environmental standards put these 'Third World' exporting countries, especially their small and medium-sized enterprises, at a competitive disadvantage. However, there are some production areas, like tropical fruits, coffee, tea or cocoa, where developing countries seem to have a definitive competitive advantage. Organically grown crops and products, which generally demand premium prices, may be the most important example.

Lately, however, some disturbing questions have arisen. Are developing countries given a fair chance to compete on the growing market for organic products? Or are they largely excluded, not because their goods are lower quality but because import regulation systems and bureaucratic requirements are too burdensome and poorly adapted to their conditions? Are emerging organic norms discriminatory? And are the concerns and particularities of organic producers taken into account in making the rules?

Stakeholder groups which work more in the field of international trade policies and regulations, especially development agencies, NGOs or organisations with projects and programmes supporting international cooperation for developing countries, need additional organic market information in order to support their lobbying work to influence multilateral agreements or policies in order to make international trade rules fairer.

4 Relation between national organic supply and demand data

Normally the relationship between supply and demand is circular, in the sense that demand may rise as a consequence of an increase in production. Therefore the relation between organic supply and demand at the national (or regional) level results in a market balance for production and consumption, but also provides information on import/export amounts and these are relevant data not only for market actors but also for different stakeholder groups, especially for those dealing not only with market issues but also with environmental, social and political aspects related to markets, like organic movements, environmental and rural development groups, fair trade collectives or cooperation for the development of Third World countries, NGOs and agencies. Policy makers and other kind of stakeholders are also interested in this type of data.

The **degree of self-sufficiency**¹ as described in the outcome of the OMIaRD Project (Hamm and Gronefeld, 2004) is a very important piece of information. The degree of self-sufficiency expresses 'to what extent each country (or region) can satisfy organic consumption through its existing levels of organic production, including that which leaves the farm gate and is available in the organic market place'. In other words, it shows the extent to which domestic organic production is able to meet domestic demand. Although this is a useful measure to determine whether countries and regions have an excess or a shortfall of domestic organic production relative to consumption, it does not give information about the origin of the organic products and whether the products come from far away.

Additionally, stakeholders in different countries are increasingly interested in having organic market supply and demand (balance) data, to know whether organic products are complying with the proximity principle implicit in the original organic philosophy, and also to know whether organic products are meeting the origin denomination (DO) or guaranteed quality labelling, adding more value to organic products.

In this sense, qualitative and quantitative organic market data on the degree of self-sufficiency become a lobbying instrument to influence the regulations and policies to the benefit of both clients and

¹ To calculate this indicator, all organic production leaving the farm gate and also available in the organic market place, is divided by total domestic organic consumption.

stakeholders. From these data we can formulate control decisions to reduce deficits or to influence policies.

Organic supply shortfalls, expected organic supply deficits, selling problems and supply deficits are difficult indicators to establish but are useful for economic market actors in order to identify products where there is a significant supply problem concerning, for example, poor distribution systems or preferences amongst domestic producers for export markets. The question to be answered is whether or not supply, including organic production volumes and imports, is sufficient to meet demand or if there are problems in sourcing enough of these organic products in the country. These problems could be of a different nature, like a lack of market transparency, wholesalers' lack of awareness about the surplus of supply in other countries, or difficulties in marketing organic products in finding wholesale distributors and processors (lack of facilities as for milk or beef) willing to participate in this market, or that the quality is not sufficient to meet the market requirements. If there are a lot of organic product categories in which large amounts are sold as conventional, this clearly indicates an organic supply surplus.

In general, there is an urgent need for market data which is accessible at an early stage in order to be able to react quickly to changing supply and demand conditions.

5 Energy consumption in food transport (food mile concept)

Transporting food across the world burns up a lot of fossil fuel and contributes to global warming. 'Food miles' - the total distance in miles the food item is transported from field to plate - has become accepted as a convenient indicator of sustainability and has led to a general movement towards local production and local consumption in order to minimise them. This raises fundamental questions about the sustainability of the globalised food trade and the increasing concentration of the food supply chain and distribution in the hands of fewer and fewer transnational corporations.

In general, this issue is particularly important in the organic farming movement, due to the emphasis, often reflected in 'private' organic standards, given to the proximity of producers to consumers, reducing the degree of transport required.

The most important causes identified for the increase in food miles are:

- globalisation of the food industry with increased imports and exports and ever wider sourcing of food within the EU and abroad,
- concentration of the food supply base into fewer, larger suppliers, partly to meet demand for bulk year-round supplies of uniform produce,
- major changes in delivery patterns with most goods now routed through supermarket regional distribution centres using larger 'heavy goods vehicles' (HGVs),
- centralised and concentrated sales in supermarkets where a weekly shop using the car has replaced frequent visits on foot.

Since the 1980s, the annual amount of food moved by HGVs in the EU has increased by more than 20 percent, with the average distance for each trip also up by 50 percent. The rise in food miles has led to increases in the environmental, social and economic burdens associated with transport. These include carbon dioxide emissions, air pollution, congestion, accidents and noise. There is a clear cause and effect relationship for food miles for these burdens – and in general higher levels of vehicle activity lead to larger impacts.

Transport of food by air has the highest CO₂ emissions per ton and is the fastest growing mode. Although air freight of food accounts for only one percent of food ton kilometres and 0.1 percent of vehicle kilometres, it produces 11 percent of the food transport CO₂ equivalent emissions.

There are some other statistics¹ which will also be interesting in the future when following up the development of organic farming in each country. Below is a partial list of useful policies that essentially leaves the existing food system untouched.

Table 2: Possible market data of interest for organic farming trade standards

Aim	Possible market data
Sourcing food more locally where appropriate	consumer awareness public procurement support for local food initiatives strengthening EU suppliers
Reducing food shopping by car	Home delivery support for local and in-town shops provision of safe cycle and pedestrian access
Reducing transport impacts	cleaner vehicles improved logistics rail freight
Internalising the social costs of transport	costs to society of pollution, congestion, accidents, noise, etc. in the prices paid by transport users
Improving the wider sustainability of food chain trading	improved energy efficiency in local food sector food transport vehicle kilometres % of all HGV kilometres in the country volume of CO ₂ production % of the total annual member states CO ₂ emissions % of the total emissions of the country road sector
Other social issues	Organic food marketed under fair trade conditions

With these indicators we can monitor the direct social, environmental and economic costs of general and organic food transport annually (social cost of congestion, like accidents or greenhouse gas emissions, air pollution, noise and infrastructure costs). The total costs (externalised costs) are currently very significant in industrialised countries compared with the gross value of the agricultural sector. What we need are data to assess whether organic markets are contributing to a decrease in these social costs or not.

6 Organic market data gathering and analysis methodologies with stakeholders

Data collection measures (and also data analyses) and indicators delivered should be accepted by the targeted stakeholders. Organic market information has to be connected as closely as possible to the interests and needs of the stakeholders groups and market actors involved. This would make possible a continuous adoption of data collection instruments.

Usually, different stakeholders are associated with different objectives and aims. Stakeholder groups take different positions, and particular interests can be 'over'-emphasised. The purpose of the data is to monitor, providing not only a description and assessment as near to reality as possible but also changing this reality in favour of the disadvantaged stakeholder groups. Data monitoring enables dialogues between the stakeholders in organic farming markets.

¹ The statistics about social cost congestion, dire as they are, only hint at the scale of the real problem both at home and abroad, where identical produce is swapped across Europe and cash crops are flown in from the Third World for the furtherance of 'free trade' promoted by the World Trade Organisation and other free trade agreements.

The most effective means of participatory data collection and analysis would be for data collectors, data analysts and stakeholders to generate the procedure for monitoring and follow up criteria. They should decide together which actors are involved and adjust their ideas with the constituents. The participatory approach to data collection and interpretation means that data collectors and data analysts work very closely together as partners rather than having a relationship consisting of a separate monitoring and a monitored group of persons (stakeholders). For this purpose, the statistical data to be gathered should be address: information oriented to the needs of intended users (**utility**), easy and efficient data to implement (**feasibility**), data which allows for the welfare of stakeholders and clients (**propriety**), and data from which conclusions are easily extracted (**accuracy**).

A participatory data collection and analysis process should also fulfil some conditions and criteria at the different stages, such as: a) methodological knowledge of the necessary data, data collection and data analysts; b) gathering and delivering relevant data through continuous discussion about the data collection process and through workshops with stakeholders where the integration of those involved can be guaranteed; c) analysis of data by several methods of empirical social research; d) review and discussion of findings where development strategies are worked out with the involvement of stakeholders.

7 Conclusions and recommendations

There is an urgent need to decrease the burdens on our environment and society at source. National and international policies which aim to encourage a comprehensive shift to local organic production and consumption and real investments in renewable energies in place of fossil fuels are among the most important options for making our food system sustainable. This would substantially reduce CO₂ emissions at a stroke, as well as wiping out the enormous externalised costs of food transport over long distances.

It is clear from the causes for increased food transport mentioned above that policies are needed to minimise food imports and exports, to promote instead national/regional self-sufficiency in food, and to reverse the concentration of food supply chains in favour of local shops and cooperatives run directly by farmers and consumers. In addition, there should be government subsidies and incentives for reducing CO₂ emissions on farms, and for farms and local communities to become energy self-sufficient in low or zero-emission renewables. That is exactly what the organic farming movement and consequently the organic markets have to achieve.

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Data for Supply Balances and International Trade – Possibilities to Build up Data Collecting and Processing Systems

Guido Recke¹ and Ulrich Hamm²

Introduction

Markets for organic products are developing rapidly all over the world. However, these markets are still small and volatile and, thus, typical niche markets. Every year thousands of farms in Europe are being converted to organic production. On the other hand, there is also information (e.g. from Austria, Denmark, Italy and the United Kingdom) that hundreds of organic farms have been re-converted to conventional farming due to marketing problems for organic products (Hamm and Gronefeld 2004). While conversion to organic production methods is supported by national governments in many countries, at the same time a national programme has been introduced in The Netherlands supporting the re-conversion of organic pig holdings to conventional farming. Re-conversions of organic farms which were financially supported during the conversion period cause losses of welfare, not only of private investments but also of public money. One of the main reasons for the re-conversion of organic farms is that organic farmers have difficulties in selling their products as organic, with a sufficient price premium above conventional prices, because there is an over-supply of some organic products in some regions. At the same time, there can be a significant higher demand than supply for the same organic products in other countries, as was the case in Europe for organic milk, beef, sheep meat and wine (Hamm and Gronefeld 2004). In Europe we face the situation in organic markets that rapid changes from supply deficits to supply surpluses and back to supply deficits take place within the space of only a few years. However, valid statistical data on the amounts of organic production and consumption do not exist in almost all countries so that it is difficult to manage or co-ordinate markets for both policy makers and market actors. Thus, there is a strong need – and also a growing demand – for such market data (Michelsen *et al.* 1999).

Currently supply balances which are necessary to assess the supply situation of a country and international trade data on organic markets are not available in the EU. Market actors and stakeholders have almost no trustworthy international trade data on organic markets, and they are not able to collect the relevant information by themselves. Political and entrepreneurial decisions are therefore based on great uncertainty which leads not only to sub-optimal but also to decelerated decisions.

The aim of this paper is to discuss the possibilities for developing Data Collection and Processing Systems (DCPS) for supply balances and international trade, based on the empirical perceptions of the EISfOM project and the methodological frame set in the European Statistics Code of Practice.

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Methodology

A suitable basis for an official statistical system should conform to the European Statistics Code of Practice which was adopted by the Statistical Programme Committee on 24 February 2005. This code is a self-regulatory instrument containing standards for the independence of the national and Community statistical authorities and provides a template for a well-functioning DCPS that produces high quality and reliable statistics. It is addressed for implementation to government and statistical authorities and for information to the users and data providers. The main principles concerning the institutional environment of these recommendations are professional independence, a mandate for data collection, adequate resources, a commitment to quality, statistical confidentiality, impartiality and objectivity. They are described in a communication paper from the Commission to the European Parliament and the Council. (Commission of the European Communities, 2005)

Possibilities for developing a data collection and processing system for international trade

In Europe the national statistical institutes and Eurostat collect and process total international trade data which allow no distinction between production from conventional or organic agricultural management. Data is collected for extra-EU trade and for intra-EU trade. The extra-EU trade statistics are higher quality as most of the quantities traded are covered. In contrast, the intra-EU trade statistics are not so good. In particular, the thresholds for reporting make it almost impossible to get a reliable picture of intra-EU trade. As thresholds differ from country to country and for imports and exports, the statistics are not comparable. To get comparable data it is obvious that the thresholds should be harmonised. They should be the same for all countries and there should be no difference between imported and exported goods. This is important for many organic products as the amounts of traded products are low and the thresholds are not lowered, a large proportion of the traded organic goods will not be covered.

Another source of international trade data is the certification bodies which collect limited information about organic trade. They collect the information on import authorisations of enterprises which import approved organic goods from third countries. The importers are obliged to fill in the estimated quantities of agricultural products they want to import from third countries. To play it safe, the importers normally will fill in higher quantities in the application than the expected quantities and the safety margins will differ depending on the importer. As a consequence, the import authorisation data do not give a realistic picture of the traded quantities and cannot be used as a reliable data source.

On the international trade level, our suggestions are that the existing data collection on intra- and extra-EU trade by national statistical institutions should be extended to differentiate between organic and conventional data. This should be done on the basis of a legal act and harmonised over all European countries so that Eurostat can build a database of high quality. This will provide politicians, market actors and stakeholders with reliable data. To reduce the workload for the statistical institutions there should be some discussion about which products in intra-EU trade should have data collected. For the extra-EU trade, the data for all products should be collected. Therefore the possibility should be investigated of introducing an extra digit in the existing database system to distinguish between organic and conventional.

From the point of cost efficiency, it might be useful to extend the existing system to a system in which differentiation between total and organic products is possible. The development of a complete new system is not a cost efficient solution.

Possibilities for developing a data collection and processing system for supply balances

Supply balances provide an overview of the amounts (in tonnes) of production, consumption, changes in stocks and foreign trade which can be used to evaluate the supply situation of an agricultural commodity for a particular country. Supply balances for all important agricultural product groups are published by all the statistical offices of individual European countries as well as by Eurostat for the EU, with a time lag of one to three years for the total market. To date, no European country provides supply balances for organically produced agricultural product groups due to the lack of data for all components.

Following the efforts within the EISfOM project to generate data for organic markets, some of the basic components of a supply balance could be provided as the amounts of production, imports and exports. For consumption, only data on the amount for human consumption has been discussed so far within the EISfOM project and the existing proposals to generate data on human consumption through panel data only deal with consumption of private consumer households. That means that part of the human consumption, which takes place outside the home in restaurants, canteens, take away services, etc. is not covered. Additionally, consumption of organic agricultural products as animal feed, for industrial uses (e.g. in the chemical industry) or seeds are not included. As with production data, inspection bodies might give information about, for example, the consumption of organic agricultural products as animal feed. To calculate total consumption, however, data for all other components of a supply balance are also needed.

Changes in stocks are not taken into consideration within the EISfOM project, which makes it hard to calculate a supply balance unless one assumes that changes in stocks are negligible for organic commodities. If it is not possible to get information on changes in stocks regularly, it might be possible to collect the data every three or five years and combine it with estimates. Further, there should be some discussion of whether inspection bodies can help to get a better insight into the problem of changes in stocks.

Furthermore, there is a special problem for supply balances with organic products which does not appear in the usual supply balance for all agricultural products. Significant amounts of organically produced products are sold on conventional markets as there are not enough customers in the organic sector for them. According to a European study by Hamm and Gronefeld (2004) based on comprehensive surveys in all 15 EU countries, 46 percent of the organically produced sheep and goat meat, 39 percent of fruit, 32 percent of milk and 31 percent of beef were sold as conventional in the year 2001. That means that data on the amount of consumption of organic products cannot be derived from data on the components listed above without the additional information on the amount of organic products sold conventionally. To get the information about how much organically produced products are sold as conventional products, an extra survey is necessary because at the moment this information is not available. The survey has to be carried out regularly on a representative sample to obtain reliable data.

As certification bodies have information about the amount of organic products which are sold as organic, they should be obliged to give this information to the national statistical institutes. Furthermore, there should be discussion about whether they should also be obliged to give additional information about production data to the statistical institutions. In some European countries electronic systems have been introduced by organic associations for certification bodies. This allows the collection of digital information about organic products from farm to fork and might bring important information for the supply chain and allow additional quality checks on the supply balance statistics. Since in every country there are one or more inspection bodies which do not use a common data system, data collection and processing must be harmonised in and between the different countries.

Further, the national statistical institutes and Eurostat have to establish a system to coordinate and check the data collection and processing of the different inspection bodies in the European countries so that data meet the quality standards defined by Eurostat. The forms to be filled in by the certification bodies should come directly from national statistical offices and should be coordinated by Eurostat to make sure that the data which are collected fulfil their needs.

To provide the statistical institutions with reliable data, the certification bodies need special software for processing. If these problems are solved, based on the existing common supply balance DCPS, a special system for organic products can be implemented. If the certification bodies do not get financial support from the government for their additional efforts in data collection and processing, costs might be shifted to the certified enterprises as happens with technical inspection institutions such as the TÜV in Germany.

Regarding cost efficiency, it might be useful to extend the existing system for common supply balances to a system in which differentiation between total and organic products is possible. Problems like organic products being sold as conventional products must, however, be solved. The information collected by inspection bodies might be an important source for filling the gaps.

Conclusion

The discussion showed that it would not be appropriate to develop complete new systems. The most suitable solution seems to be to work with the existing systems and add the facility to distinguish between organic and conventional data. The special problems, such as organic products which are sold as conventional, must be solved in advance. Additional information from experts and inspection bodies could be obtained to provide reliable data for politicians, stakeholders and market actors as the basis for sound decision-making.

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Compiling Supply Balance Sheets

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Aim

The objective of this contribution is to examine how to establish supply balance sheets (SBS) as much as possible by a central body of the European Community and to limit the participation of the national authorities.

The common agricultural statistical system is being revised and adapted to the evolution of the CAP and the increasing economic integration of the Member States. The purpose is also to reduce costs and the burden on the respondents. During last year supply balance sheets were discussed by the Standing Committee of Agricultural Statistics (SCAS) and a compromise was found in July 2005 to simplify the SBS while maintaining the most useful and important features. Eurostat was given the task of establishing some of them at national and/or EU-level.

In this document, the first chapter is a reminder of the definition of the SBS using the proceedings of the 1st EISfOM seminar. The following chapters are based on the analysis provided to the SCAS and include an overview of the current situation, of the user's needs, of the quality of the existing information and of the simplification proposed. The last chapter is dedicated to the prospects for compiling SBS for organic products.

1 Definitions

The definition refers to the widest scope and does not take into account particularities of some agricultural production. To get more in-depth information, the reader is invited to consult the proceedings of the 1st EISfOM Seminar and the relevant methodology.

1.1 The supply balance sheet

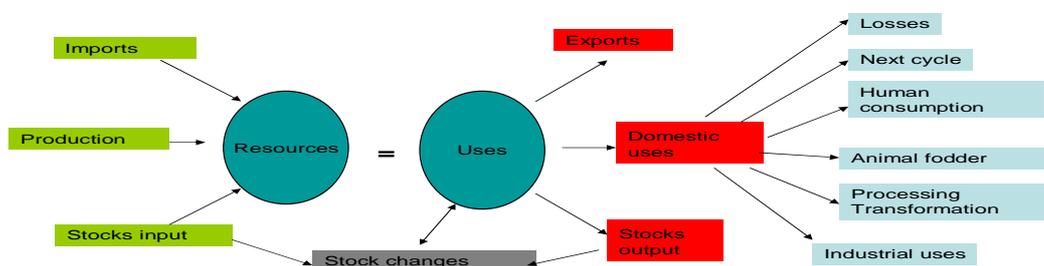
The supply balance sheet is a method of comparing the resources and uses of a product. The SBS covers the product life from production to the wholesale trade; retailers and households are outside the range.

The purpose of the SBS is either market management or food management. In the EU, SBS are used for market management and provide an overall view of the market of an agricultural product by country and for the European Union. Market management means regulation of the balance between production and the needs of external trade to a certain extent prices and budgetary concerns. Food management is a concept applied by the FAO to supply food first to the world population and to the animals.

Data sources vary depending on the product itself and the operation recorded. Each country has its own administrative organisation. In general, external trade is recorded by the customs authority. In the EU for the intra-Community trade, customs declarations have been replaced by the Intratstat system.

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Fig. 1 - The supply balance sheet



This picture shows the different components of a supply balance sheet in its general form. For a given product or a given country, all the components are not mandatory. If there is no production, then imports are required; if the raw product is not directly consumable, the main domestic use is processing.

1.2 Geographic area

The SBS are established at the level at which the required information is available. External trade figures are compiled at the national level. Within the framework of the European Union, the SBS are worked out for the customs territory of the Member States, defined in accordance with Council Regulation (EC) No 2913/92 of 12 October 1992 establishing the

Community Customs Code, as last amended by the Accession Treaty of 29 March 2003. This means that some non-European territories of the Member States are excluded (see Annex I for details).

1.3 Unit

Calculated from various sources of data, the SBS are compiled using a common unit which allows for the conversion of a processed product into a raw product or a compound product within the SBS. The most frequently used units refer to the weight in 1000 tonnes and in the case of meat, 1000 tonnes carcass weight and for eggs 1000 shell-eggs tonnes.

1.4 Period of reference

The reference period normally stretches over 12 consecutive months, which is the calendar year for livestock products and the twelve months of a marketing year for crop products. Certain balance sheets (vegetable, fat balance sheets) are worked out by calendar year as well as by marketing year.

The marketing years for the various crop supply balance sheets can start at different dates. Council Regulations on the common organisation of the markets specify the starting and end dates of the marketing year required by the Community.

1.5 Per capita consumption

Human *per capita* consumption is obtained by dividing total human consumption by the number of inhabitants.

The calculation of consumption per capita uses the population data in official statistics. The following dates are used:

- 31 December for balance sheets by marketing year,

- 30 June for balance sheets by calendar year.

The statistics refer to the resident population of each country; persons who normally reside in a country but are temporarily absent are included in the total population figure, while foreigners residing temporarily in the country are excluded from it for the same reasons.

It is thus possible to determine an apparent human *per capita* consumption.

1.6 Degree of self-sufficiency

The degree of self-sufficiency of a given region indicates up to what point 'domestic production' (from domestic raw material) in this region is able to meet all the needs or 'domestic use' (total use for humans, animals and industry) of this region.

$$\text{Degree of self-sufficiency} = \frac{\text{'Domestic production'} \times 100}{\text{'Domestic use'}}$$

The 'domestic production' is easily determined for crop and milk production, with crop harvest or milk collection being known at the level of the farm. In the case of meat production, live animals are both imported or exported; foreign trade has an impact on a country's self-sufficiency in meat without being 'domestic production', and the notion of 'gross indigenous production' has been introduced in order to estimate the 'domestic production'.

1.7 Components of supply balance sheets

The list below refers to Figure 1 in chapter 1. Currently the EU Member States compile the SBS using common definitions for the various items. The definitions given below reflect the general approach; a more precise definition depending on the product is also available in each specific handbook. Each country delivers the information at national level. To obtain the EU level, an aggregation of the different components is made. The EU level is considered here as the whole geographical territory for which some SBS components are not simply the sum of the national figures. The external trade of the EU is only the external trade of the Member States with the third countries; intra-EU trade is eliminated.

1.7.1 Usable production

The usable production represents the usable quantities resulting from the production process during the reference period, on the understanding that the losses suffered during this process and up until the delivery do not appear in this heading.

Example 1: Cereals

This involves the quantities collected and delivered to the seat of the holding. It is available to be sold off the holding or used or consumed directly on the holding. It includes marketed production, misrepresented quantities, self-provided quantities, self-consumed quantities and losses on the farm (handling, waste, pest damage, etc.). It excludes the non-harvested quantities, the losses to the harvest (on the plot) and the losses at the time of transportation from the plot to the seat of the holding.

Example 2: Meat

'Usable production' (net production) is the overall tonnage of meat found suitable for human consumption by health services. This meat comes from all the animals slaughtered in the country, of domestic and foreign origin.

Example 3: Fish

This involves the unloading of fish by fishing vessels of the Member State to national or foreign ports and transfers at sea on foreign boats.

1.7.2 External trade, imports and exports

The foreign trade for the SBS is established following a list of selected products corresponding to the tariff and statistical nomenclature and to the Common Customs Tariff in force. The product list refers to the CN, Combined Nomenclature, from which it is extracted.

The source used for the 'Imports' and 'Exports' items of the supply balance sheets are the official foreign trade statistics which cover goods (gross products or processed products):

- which enter or leave the statistical territory of the Community (extra-Community trade),
- which circulate between the statistical territories of the Member States (intra-Community trade).

The list includes all the products related to the supply balance sheet concerned: the raw product, the processed products and the manufactured products. A conversion coefficient helps to convert product weight into the unit of the balance sheet. Conversion is necessary to pass from a processed product to the raw product or to pass from a compound product to its raw product components expressed in the unit of the balance sheet. Reference coefficients have been set by Eurostat, but the Member States are entitled to use their own coefficients.

The distinction between intra-EU and extra-EU trade remains in order to measure the external trade of the EU with the third countries which is reported in the EU-level SBS.

1.7.3 Stocks and changes in stocks

SBS are worked with stocks input at the beginning of the reference period as resources and stocks output at the end of the reference period as use of products. The census of existing stocks at the beginning and at the end of a balance sheet reference period presents various degrees of difficulty, according to the product and the nature of stocks.

Instead of stocks at the beginning and at the end of the reference period, the changes of stocks during this period are frequently used. For some products where stocks exist, the stock variation is not significant. For highly perishable goods (for example, fresh vegetables), it is possible to ignore stocks and stock changes.

Considering that the SBS covers the product cycle from production to the wholesale trade, stocks reported are :

- producers' stocks;
- public stocks and security stocks;
- intervention stocks;
- stocks on the market, including wholesaling, importers/exporters and processing plants;

Retail stocks and household stocks are not covered.

1.7.4 Domestic uses

Domestic use is a country's overall consumption of a product. It is shared between seeds or eggs for hatching, losses, human consumption, animal feed, processing and industrial uses.

1.7.4.1 Seeds and eggs for hatching

This involves the quantities of raw product used for the following production cycle.

1.7.4.2 Losses

This represents the usable production which is lost at the level of :

- the production sector losses
- the marketing sector losses.

For production sector losses, the losses during harvest operations are already deducted to determine 'usable production'. Losses on the holding (waste, loss in sorting, losses after the wine harvest statement) should be entered in this item. Meat unfit for consumption is not recorded in the usable production.

For marketing sector losses, this involves losses which have occurred during storage, transportation, processing and packing (including the losses by drying).

Losses, in general, are fixed in the most realistic way possible but can be an estimate in percentage terms (based on experience).

When certain produced quantities are not marketed but withdrawn from the market and made unsuitable for consumption, these quantities also appear under 'Losses'.

1.7.4.3 Human consumption

The 'Human consumption' heading in the balance sheet indicates the quantities of foodstuffs self-consumed or produced by the agri-industry for consumption by the inhabitants of the territory during the reference period. It involves the quantities delivered in various forms (unprocessed, processed, preserved, etc.) by the wholesalers to the retail trade, to communities (canteens, restaurants, hospitals, etc.) and the quantities consumed directly by the producers. The losses and changes of stocks at retail trade level and at consumer level also appear under this heading.

1.7.4.4 Animal feed

This entry shows the quantities of raw products used for feeding animals during the reference period. It covers the quantities of raw products produced and consumed on the holdings (direct animal feeding) and those delivered to the animal fodder industry.

Processing means the transformation of a raw product into another food product for which a balance sheet is compiled.

'Processing' on the balance sheet establishes a link between the supply balance sheet of a raw product and that of another product resulting from the processing of the first.

This entry shows the quantity of raw product processed.

1.7.4.5 Industrial uses

The quantities used by industry during the reference period appear in this section of the balance sheet, insofar as this involves quantities which are intended neither for human consumption nor for animal feed.

2 Current situation

The balances are compiled for a reference period (a calendar year or marketing year) and with regard to a geographical entity. They compare the resources of a product (made up of production, stocks at the start of the year, and imports) and its uses (internal use, final stocks and exports). Internal use can in turn be broken down into losses, human consumption, animal feed, processing, industrial uses and preparations for the next production cycle (seed).

Even if the methodology is clear, it is difficult in practice to collect all the data for some balances. But the availability and the need for the information vary with the product.

2.1 The different balances

A look at the statistical data published by Eurostat reveals 156 balances for crop products, meat, milk, eggs, sugar and fats. Table 1 below shows a breakdown of the balances by different agricultural products, reference periods and deadlines for the submission of provisional and final results.

Table 1: Breakdown of balances

	Farm	Market	Total	Period	Provisional	Final
Cereals	11	11	11	1/8 – 31/7	15/11	15/2
Rice			15	1/9 – 31/8	15/11	15/2
Dried pulses			4	1/7 – 30/6		15/12
Potatoes			4	1/7 – 30/6	15/9	15/12
Vegetables			4	1/7 – 30/9		15/12
Fruits			10	1/7 – 30/6		15/12
Wine			31	1/8 – 31/7	15/11	15/3
Sugar			4	1/7 – 30/6	30/11	28/2
Meat			8	1/1 – 31/12	30/4	30/6
Dairy products			10	1/1 – 31/12	30/4	30/6
Eggs			2	1/1 – 31/12	30/4	30/6
Fats			31	Marketing/ calendar		15/3 31/8

‘Farm’ and ‘market’ balances appear for cereals, as not all of the harvest is marketed and only agricultural sales enter the market balance.

2.2 Balance sheet items

The list of items in the balances is given in Annex II.

These items can be grouped into several main families:

- production,
- external trade
- stocks,
- domestic uses,
- derived information.

2.2.1 Usable production

This figure is obtained from production statistics. It is not always complete, as certain Member States are unable to compile some production data, such as for the production of poultry meat. Egg production is not collected at Eurostat.

2.2.2 External trade

A distinction needs to be made between intra-EU trade and trade between the European Union and third countries.

With the entry in force of Intrastat, thresholds of declaration were introduced for imports and exports for the trade between Member States; this causes a lack of accuracy in the intra-EU trade and different rules are applied:

- thresholds are different for imports and exports, and in general the import thresholds are lower; the threshold is applied by operator on the market; thresholds are expressed in price value, and depending price fluctuations, the tonnage referred to could change over time.
- the declaration of import or export is obligatory when the threshold is reached; in some Member States and for some products there is no threshold, so all operations are declared;
- when the declaration is required, either it starts from the threshold upwards and the part below the threshold is not declared;
- or when the declaration is required, it starts from the beginning of the yearly exercise, and the part below the threshold is also declared.

Trade with third countries is recorded without any thresholds. The distinction between intra-EU and extra-EU trade remains in order to obtain the external trade of the EU with the third countries which is reported in the EU-level SBS.

The international trade data are entered into the COMEXT database. For trade in live animals, some information can be obtained from TRACES, a database run by DG Sanco to follow the movements of live animals mainly between Member States, although some third countries are also involved in this.

2.2.3 Stocks

The more perishable the product, the less important are stocks. Significant stocks are held for non-perishable crop products, mainly cereals, rice, maize, dry vegetables, powdered dairy products and butter.

In order to avoid measuring stocks at the start and end of the period, some balances record changes in stocks, and for some products this change is regarded as negligible. DG Agri holds details of stocks where intervention is required or where market support measures are implemented. In the case of other stocks, wholesale trade or the agri-food industry, where information on stocks is not always available, it is therefore assumed that these undertakings only build up the stocks they need to carry out their activities and thus the change in stock is negligible.

2.2.4 Domestic uses

This is the proportion of agricultural consumption used in a country made up of losses, human consumption, animal feed, processing, industrial uses and seed. Losses and seed are sometimes estimated as a percentage of domestic use. The other variables are not collected for production and are unknown outside of the balances.

Whilst animal feed is not given in all the balances (e.g. meat), it accounts for a significant proportion of the use of non-perishable crop products such as cereals, rice, maize, etc.

3 Users' needs

From the discussions on the future of the balances, two users emerged: DG Agri and DG Sanco (together with Eurostat's Food Safety Unit). Other users from professional and information circles gave their views at an *ad hoc* seminar.

Balances offer a brief overview of the production, use and consumption of an agricultural product. For some components of balances, it is difficult for users to calculate aggregates requiring a range of products to be taken into consideration and knowledge of the coefficients, etc. External trade is an example of this. Other components are inaccessible because they are not published, particularly details on domestic use.

The need for balance sheets at a national level essentially concerns those products for which legislation currently exists (wine) or for which the market is being re-examined (sugar beet, sugar, rice), as well as those products which give rise to a short-term perspective (fruit, vegetables, potatoes, meat, milk and eggs) or are the subject of local markets (fruit).

Certain products (e.g. rapeseed) give old and new perspectives on multiple usages, including, in particular, animal feed and industrial usage (bio fuel). New requirements for information concerning food safety and new methods of production (organic farming, GMO etc.) often refer to the national valuation of production and domestic use by using the supply balance sheets as the only source of data on the current position.

3.1 Market management

Foodstuffs and animal feedstuffs give cause for concern. Management of the market in agricultural products is linked to food management. The EU Member States are well organised and, for the moment, no longer fear shortages. Food shortages aside, managing the market also means managing imports and exports, issuing licences, supporting the market where necessary, not immobilising stocks unnecessarily and not wasting perishable foods.

Market management has a number of repercussions for the Community budget with regard to refunds and levies. Some products are allocated production subsidies.

3.2 Market research and modelling

A number of private users make use of the information to analyse the capacity of national markets and make judicious investments. The balances provide valuable information on the saturation of national markets and indigenous production capacity. The modelling tools and dissemination used by Eurostat, CAPSIM and Agri also make use of the data contained in the supply balance sheets.

3.3 Analyses of consumer habits and the impact study on health

These analyses are carried out with the aid of several sources of information and consumer surveys.

3.4 Publications

Ever since the Eurostat website displaying results came into service, users have had direct access to statistical information. Many users, whether the specialist press or professional bodies, use this in their publications.

4 Quality of the information

The word 'balance' should not be interpreted in accountancy terms: the variables in a supply balance are statistical variables, and whilst they give a broad idea of the actual situation they approach it in ways

which can differ considerably. Depending on the type of variable, the quality of the information ranges from very good to less good.

4.1 Production (+ good)

For most agricultural products, this information is of very high quality. Particular efforts are, however, required:

- in some Member States for meat production other than bovine, pig meat, sheep meat and goat meat;
- for the production of eggs, on which data are not collected by Eurostat, the only figures available are the balance data. Estimates are compiled on the basis of the number of chicks of laying strains, average production per hen and average egg weight.

4.2 External trade (- good)

Inaccuracies result from:

- the lack of precision on intra-Community trade caused by the application of Intrastat reporting thresholds;
- the possible application of factors to convert the weight of the processed product to the weight of the basic agricultural product used expressed in the reference unit for this product (e.g. carcass weight rather than net produce tonne).

All the Member States' national balances are subject to these inaccuracies. The EU-25 balance does not take into account the trade between Member States; all import-export transactions between EU and third countries are recorded.

4.3 Stocks (- good)

The only stocks for which there is detailed information are intervention stocks and market support stocks. Wholesale trade stocks and agri-food industry stocks should be included when compiling balances. A number of Member States have stated that it is impossible to establish these stocks or to collect reliable information without running costly operations of questionable effectiveness.

In the absence of information on stocks at the beginning and end of the financial year, changes in stocks offer an acceptable solution. Assumptions can thus be made on the basis of such changes, taking into account the fact that stocks of fresh or perishable products are low or only short-term, and that undertakings in trade or industry only hold the stocks they need for their activities.

4.4 Domestic uses (- - good)

The 'domestic use' variable is tainted with the inaccuracy associated with external trade and stocks. In addition, the different domestic use items are sometimes approximate or undetermined:

- losses are estimated as a percentage;
- animal feed is not compiled for certain products, e.g. meat, eggs, etc;
- human consumption is thus overestimated;
- animal feed could include a proportion of the product not included in production (part of the carcass excluded from the carcass weight);
- although it does exist, industrial use is not compiled;
- processing only includes the manufacture of food products involved in the compilation of the balance and this balance is included in the basic product balance by applying conversion coefficients. For

example: the making of sausages from meat is not counted as a transformation because it does not give rise to a particular balance. Sugar is considered as a transformation: a sugar balance is determined and by means of coefficients it is possible to include the sugar equivalent in the sugar beet balance

Efforts must be made to ensure that external trade in the by-products does not distort the basic product balance: imports of fine husked rice do not increase a country's production of paddy rice, but can be attributed as an import equivalent of paddy rice.

4.5 Derived information (? good)

It has already been noted that inaccuracies in stocks and external trade have an impact on resources, uses and domestic use. They also affect the self-supply rate and apparent per capita consumption.

Apparent per capita consumption is a reference parameter:

- -ourists are not included as part of the consumer population of the countries under consideration;
- for certain products where animal feed is not determined, all consumption is considered human consumption, which means that the meat used to feed dogs and cats is considered to have been consumed by humans!

These two factors lead to a certain overestimation of per capita human consumption, which is why it is labelled 'apparent'.

5 Simplification in the compilation of the SBS

The developments sketched out above have attempted to define the limits to the response currently provided by supply balances in meeting user expectations.

Looking forward, there are a number of options to investigate. These are to:

- lighten the workload by using available sources of data;
- apply working hypotheses;
- strengthen the quality of production data;
- stop compiling national balances;
- have Eurostat draw up balances for the European Union (EU-25) only;
- have Eurostat draw up national balances;
- have the Member States draw up national balances.

5.1 Lightening the workload

At present the balances are a set of data which is treated as being functionally separate from other data. In actual fact, the balances are related to the figures for production and for external trade and to the calculations of stocks. The balances could be seen as a dynamic set of information making direct use of other data sources and evolving with the latter.

Proposal:

- make use of the databases for external trade (COMEXT) and for monitoring the movements of live animals (TRACES);
- make use of reference data on intervention stocks and market support;
- examine the relevance of the coefficients for converting product weights to reference units;

- research sources of information on the manufacture of animal food and of certain foodstuffs or beverages;
- apply a model relating to the introduction of chicks for the production of eggs for hatching and consumption;
- -make use of available information, Member State publications or internet consultation.

5.2 Working hypothesis

When the quality of the figures was considered, it was noted that some hypotheses were put forward to compensate for the lack of information.

Proposal:

- -except for cereals and non-perishable crop products, powdered dairy products and butter: take into account only intervention and market support stocks on the assumption that there are only minor variations in stocks for the retail trade and the agri-food industry;
- estimate losses as a percentage
- -maintain the current approach, in view of the lack of any other reliable data, whereby all consumption is human (i.e. no animal food).

5.3 Improving the quality of production data

Production data are not complete and, in spite of agreements, some Member States are unable to compile some basic indicators.

Proposal:

- - study the indicators required for a complete overview of production (e.g. production of poultry meat, other meat, production of eggs).

5.4 Stop compiling balances

Proposal:

a) Stop compiling balances for:

- molasses;
- cocoa;
- fat and oils from land animals;
- fat and oils from marine animals;
- castor seeds, ground nuts, sesame seeds, copra, peanuts, palm kernels for seed and oilcakes
- other balances for seed, oil and oilcakes.

b) Consider possible simplification of cereals balance:

- -compile only an overall balance instead of separate farm and market balances: this raises the question of the usefulness of the farm balance. This does not necessarily involve any significant saving in terms of resources since the overall balance would require both 'farm' and 'market' information to be collected.

5.5 Balances compiled at the EU level

The construction of balance sheets at EU-25 level by a direct approach requires establishing balances without the availability and aggregation of national balances. In this context, it is useful to review the different composition of balances, and to check how the necessary information could be obtained.

Subject to the availability of basic information, i.e. production, stocks and trade, and not taking into account detailed internal uses, compile balances for:

- cereals: soft wheat, durum wheat, barley, grain maize, triticale, rye and maslin, oats and summer cereals and sorghum
- -oil crops: soya, sunflower, linseed for fruit, oil and oilcakes;
- dried pulses: peas, horse and broad beans, sweet lupine;
- -other: maize (oilcakes), maize germ (oil), cotton (seeds), honey;
- -fresh grapes and stone fruits.

Possible hypothesis: some production is earmarked solely for a single internal use apart from losses, seeds and hatching eggs.

5.6 National balances compiled by Eurostat

The following information is considered available:

- usable production;
- external trade derived from COMEXT and TRACES;
- intervention and/or market support stocks.

The following hypotheses are formulated:

- -losses are expressed as percentages;
- -processing and industrial use are insignificant.

Proposal:

- Compile national and EU-25 balances for meat, eggs (production estimate required).
- Eurostat will investigate the feasibility of national balance sheets for milk and milk products from existing sources, in particular the data on annual production and usage of milk (all kinds of milk) in dairies (Table B of decision 97/80/CE)

5.7 National balances compiled by the Member States

It is proposed that the Member States continue to compile the following balances:

- Rice (paddy, husked, milled);
- -sugar beet;
- sugar;
- potatoes and potato starch;
- fruit and vegetables: cauliflowers, tomatoes (fresh and processed), oranges, peaches, apples, pears (fresh and processed);
- rape: seed, oil and oilcakes;
- olives: fruit, oil and residue;
- prepared oil and fats: margarine and white products;
- wine.

This proposal does not exclude considering the possibility of compiling balances with the help of available data and certain hypotheses concerning stocks, losses, processing and industrial uses.

6 Prospects for organic products

According to chapter 5, establishing SBS requires that the basic data are available, a collecting and handling system is operational and regularly delivered data are processed. In the view of the Commission, all users' needs must be analysed in order to include the various sets of data, i.e. data for conventional agriculture, data for organic farming, and why not data on GMO production?

6.1 Data requirements

The quality of an indicator is defined as its capacity to meet users' needs in terms of relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability and coherence. In the framework of agricultural production, the users must consider some cost/efficiency concerns: they cannot require expensive data collection for insignificant indicators or for locally relevant indicators. The observation framework is the EU-level.

6.1.1 Selecting needs

From the list of products to 'SBS', the most useful must be retained. For instance some fats and oils are not relevant. The basic data required are :

- production figures
- stocks or changes in stocks
- trade data.

For some products (mainly products used to feed animals), additional data are required from the data providers. Looking forward to the future, new domestic uses become more important : the use of crops to produce energy and fuel.

6.1.2 From zero to a complete balance sheet

With the few data listed above a skeleton of the SBS can be established. For better accuracy, particularly the distinction between the different domestic uses, data should be provided by the Member States.

Currently no distinction is made during data collection between conventional, organic or GMO productions, stocks or trade.

6.1.3 Data providers, defining methods

The first approach is to define the set of data to be collected and to find the reliable sources. Stamps of quality are given by the National Statistical Institutes. Unofficial sources are not always stamped.

One must be aware that the trade regulation is going to be revised: intra-EU trade could become less accurate and unusable.

This step implies negotiations with the data providers, examining sources of data, quality of the available information. If legal acts are foreseen, it could take many years. Currently, a process of simplification of the legislation is taking place and this might offer an opportunity to insert new provisions. It also implies the existence of sources of data or the introduction of statistical estimates. A complementary approach would be to invite the significant producing countries to provide data.

6.2 Setting up a collecting, handling and storage system

A collection, handling and storage system already exists for conventional production. It needs to be enhanced to include other type of production. The storage system is held as time series. Additional time series and aggregation formulas need to be created and data validation rules to be defined.

Twelve person months is the lowest estimate for adapting the information and dissemination system.

6.3 Regular data handling

Currently the cost of handling SBS data is 12 person months per year. Since Eurostat's new approach is not yet implemented, it is difficult to give an estimate the increase in the workload from handling trade data from the trade database, collecting production and stocks figures and eventually mixing various sources, with some Member States continuing to deliver their national SBS.

Conclusion

Collecting statistical information on agriculture always involves a compromise to reach an acceptable cost/efficiency rate. This is a compromise between the law and a gentleman's agreement, between accuracy and the availability or acquisition of information, between resource investment and results. Agriculture is made up of a wide range of different activities conducted by millions of people in the EU. Guidelines and procedures must to be defined to get reliable, relevant and useful indicators. Questions are often raised on the usefulness of the data collected. Most of the Member States are facing budgetary problems and want to save some financial resources by reducing their workload, using other sources of information to replace surveys or planning and organising their activities better. They also recommend that the Commission's services coordinate their requests for statistical information better.

So far organic farming has not been separated out in the statistical process. With a regular review of needs, new perspectives in rural development and crop production for purposes other than food and food safety issues, the extension of the statistics to cover other topics becomes both possible and desirable.

Organic farming is one of these topics.

ANNEX I

Customs territory of the European Community

1. The customs territory of the Community shall comprise:

- the territory of the Kingdom of Belgium,
- the territory of the Kingdom of Denmark, except the Faeroe Islands and Greenland,
- the territory of the Federal Republic of Germany, except the Island of Heligoland and the territory of Buesingen (Treaty of 23 November 1964 between the Federal Republic of Germany and the Swiss Confederation),
- the territory of the Hellenic Republic,
- the territory of the Kingdom of Spain, except Ceuta and Melilla,
- the territory of the French Republic, except the overseas territories, Saint-Pierre and Miquelon and Mayotte,
- the territory of Ireland,
- the territory of the Italian Republic, except the municipalities of Livigno and Campione d'Italia and the national waters of Lake Lugano which are between the bank and the political frontier of the area between Ponte Tresa and Porto Ceresio,
- the territory of the Grand Duchy of Luxembourg,
- the territory of the Kingdom of the Netherlands in Europe,
- the territory of the Republic of Austria,
- the territory of the Portuguese Republic,
- the territory of the Republic of Finland,
- the territory of the Kingdom of Sweden,
- the territory of the United Kingdom of Great Britain and Northern Ireland and of the Channel Islands and the Isle of Man.
- the territory of the Czech Republic,
- the territory of the Republic of Estonia,
- the territory of the Republic of Cyprus,

- the territory of the Republic of Latvia,
- the territory of the Republic of Lithuania,
- the territory of the Republic of Hungary,
- the territory of the Republic of Malta,
- the territory of the Republic of Poland,
- the territory of the Republic of Slovenia,
- the territory of the Slovak Republic,

2 Although situated outside the territory of the French Republic, the territory of the Principality of Monaco as defined in the Customs Convention signed in Paris on 18 May 1963 (Official Journal of the French Republic of 27 September 1963, p. 8679) shall, by virtue of that Convention, also be considered to be part of the customs territory of the Community.

3. The customs territory of the Community shall include the territorial waters, the inland maritime waters and the airspace of the Member States, and the territories referred to in paragraph 2, except for the territorial waters, the inland maritime waters and the airspace of those territories which are not part of the customs territory of the Community pursuant to paragraph 1.

ANNEX II

List of balance headings

- 1 Gross indigenous production (1000 t carcass weight)
- 2 Total exports of live animals (for EU: exports to third countries) (1000 t carcass weight)
- 4 Exports to EU (intra-EU) of live animals (solely by country) (1000 t carcass weight)
- 6 Imports of live animals (for EU: imports from third countries) (1000 t carcass weight)
- 8 Imports from EU (intra-EU) of live animals (for EU: intra-EU trade) (1000 t carcass weight)
- 12 Usable production (1000 t)
- 20 Total imports (for EU: imports from third countries) (1000 t)
- 26 Imports from EU-25 (for EU: intra-EU trade) (1000 t)
- 30 Total exports (for EU: exports to third countries) (1000 t)
- 36 Exports to EU-25 (solely by country) (1000 t)
- 40 End stocks (1000 t)
- 42 End stocks: market (1000 t)
- 45 Changes in stocks (1000 t)
- 47 Changes in stocks: market (1000 t)
- 50 Total internal use (1000 t)
- 51 Seed - total (1000 t)
- 52 Seed (farm) (1000 t)
- 53 Losses (1000 t)
- 54 Losses - farm (1000 t)
- 55 Animal feed (1000 t)
- 56 Animal feed of indigenous origin (Member States only) (1000 t)
- 57 Animal feed - farm
- 58 Total intra-EU imports of animal feed of Community origin (1000 t)
- 59 Hatching eggs
- 60 Industrial uses (1000 t)
- 61 Industrial uses: alcohol (1000 t)
- 62 Industrial uses: beer (1000 t)
- 65 Processing (1000 t)
- 67 Agricultural sales ('farm' balances) (1000 t)
- 68 Processing to milled rice ('paddy rice' balances) (1000 t)
- 69 Agricultural purchases ('market' balances) (1000 t)
- 70 Gross human consumption (1000 t)
- 71 Net human consumption (flour equivalent) (1000 t)

- 72 Gross human consumption ('farm' balances) (1000 t)
- 73 Gross human consumption of processed products (1000 t)
- 80 Self-supply ratio (%)
- 90 Per capita gross human consumption (kg/per capita)
- 91 Per capita net human consumption (flour equivalent) (kg/per capita)
- 94 Total own-consumption ('farm' balances) (1000 t)
- 96 Slaughtering weight
- 98 Usable production (millions of eggs)
- 99 Resources = uses (1000 t)

International Trade in Organic Products from the Perspective of a National Statistical Office

Poul Henning Larsen¹

1 Introduction

For more than a decade the importance of the organic sector has been increasing, resulting in increased needs for statistical information on the sector. In Denmark, primarily based on administrative records, the first part of the chain from primary production to final consumption has been rather good for some time, whereas information on processing and sales has been of a less comprehensive.

Against this background, Statistics Denmark, with financial support from The Directorate for Food, Fisheries and Agri Business, has conducted two new surveys:

- Turnover of organic foods in retail shops
- Foreign trade in organic products

for the statistical years 2003 and 2004.

This paper will present information on methodological considerations for the survey *Foreign trade in organic products* and thereafter will provide an overview of the methods actually used². Finally, some concluding remarks are given.

2 Methodological considerations

When preparing the new survey *Foreign trade in organic products* Statistics Denmark had the following methodological considerations:

1. The survey must be seen as an integrated part of the National Statistical System in Denmark
2. When developing the methodology, the response burden must be minimised as far as possible

2.1 Integrated part of the National Statistical System

Statistics Denmark is the central authority for statistical matters in Denmark³. As a consequence, the new survey is seen as a sub-section of the overall foreign trade statistics. This means that the new survey has the same structure as the overall foreign trade statistics where Intrastat covers trade between Denmark and the other EU countries and Extrastat covers trade between Denmark and third countries.

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2 A very detailed report: Foreign trade statistics for organic products with special focus on methodological aspects has been prepared by Statistics Denmark for Eurostat. The report can be supplied if requested from Eurostat or the author of this paper.

3 Act on Statistics Denmark, Section 1. An institution designated Statistics Denmark shall be established as the central authority for Danish statistics.

2.2 Minimise the response burden

Like many European countries in the last decade, in Denmark there has been an increased focus on reducing the response burden for the business enterprises. For the new survey, this has meant that business enterprises which are used to reporting information on the commodities using the CN-8 nomenclature should also report using the CN-8 nomenclature in this survey. It is Statistics Denmark's general position that, in order to produce valid statistics, the number of categories in the CN-8 nomenclature must not be expanded¹.

3 Foreign trade in organic products

In the Danish framework, organic products can only be considered as organic if the farm producing the product is licensed by the government. Organic farms are certified and controlled by The Danish Plant Directorate². With a few exceptions, the organic products can only be processed and distributed to the consumer if the shop is certified and controlled by The Danish Veterinary and Food Administration³. Both institutions work in accordance with a very detailed protocol which conforms with various EU regulations. The two institutions are therefore important potential sources for better information on the sector.

Furthermore, Statistics Denmark has a yearly register of foreign trade based on information compiled from Intrastat and Extrastat.

To produce a survey population, three registers are used:

1. organic farms certified by The Danish Plant Directorate
2. business enterprises certified by The Danish Veterinary and Food Administration
3. Statistics Denmark's register of foreign trade

By matching the information on certified farms and business enterprises from The Danish Plant Directorate and The Danish Veterinary and Food Administration with Statistics Denmark's information on foreign trade, it is possible to create the population for the survey. By using this method, it is possible to validate data immediately as well as minimising the response burden for the trade, as it is only necessary to send questionnaires to those establishments that have been active in foreign trade.

The statistical model for data collection for foreign trade in organic products in 2003 and 2004 was as follows:

The basis population was made up by the about 4'000 certified farms and business enterprises in the registers of The Danish Plant Directorate and The Danish Veterinary and Food Administration for the actual year of the survey.

This basic population was matched with Statistics Denmark's information on foreign trade as regards the actual year of the survey.

Those farms and business enterprises that had foreign trade with potential organic products constituted the final population for the survey. The survey population in 2003 was 237 farms and business enterprises.

The questionnaires were posted in June, requesting information on foreign trade in organic products for the previous year.

1 At present there are about 10'500 categories in the CN-8 nomenclature of which about 1'00 can potentially be organic products.

2 For further information, see www.pdir.dk

3 For further information, see www.fdir.dk

The population received a questionnaire with information on foreign trade that the farms and business enterprises had already reported to Statistics Denmark and/or customs authorities (volume, prices in DKK and country). The farms and business enterprises were requested to report the share of organic products. The questionnaires were in two versions: a paper version and an electronic version on a CD-ROM.

When Statistics Denmark received the questionnaire, various checks were carried out.

For the electronic questionnaire it was checked that the

- respondent had not removed or added lines in the questionnaire
- reported organic quantity and value were less than or equal to the total reported quantity and value¹

For the paper questionnaire it was checked that the

- reported organic quantity and value were less than or equal to the total reported quantity and value²

The subsequent more qualitative check was carried out after the data was loaded into a database.

For each business enterprise, price per unit (volume/value) was calculated for each row in the import and export questionnaire(s) for conventional as well as for organic products.

The following checks, amongst others, were performed:

- for each row, prices for conventional and organic products were compared
- for each business enterprise, import and export prices were compared at CN-8 level
- prices at CN-8 level for import and export were compared between business enterprises
- prices were compared with other available price statistics

On the basis of the above checks, in some cases Statistics Denmark did contact the business enterprise(s) to clarify the reported information.

At a macro level, the export information was compared with the survey that had been conducted by Organic Denmark³, an organisation that for the last few years has conducted a survey covering the export of organic products⁴.

The main results for 2003 can be found in the table below.

Table: Foreign trade in organic products by commodity groups (SITC). 2003

		Import	Export	Import	Export
		DKK ⁵ thousand		per cent	
	Total	278'034	231'349	100.0	100.0
00	Live animals	45	-	0.0	-
01	Meat and meat preparations	-	34'037	-	14.7
02	Dairy products and eggs	3'940	71'755	1.4	31.0

1 In a few cases, the value and/or quantity were greater than reported to the foreign trade statistics because the previous reporting was wrong.

2 See the above note.

3 Organic Denmark is a non-governmental organisation for farmers, producers and consumers.

4 Økologisk Landsforening, 2004. Eksportnotat 2003 and www.okoland.dk.

5 1€ = 7.5 DKK

		Import	Export	Import	Export
		DKK ⁵ thousand		per cent	
04	Cereals and cereal preparations	50'951	24'411	18.3	10.6
05	Vegetables and fruit	94'845	28'399	34.1	12.3
06	Sugars, sugar preparations and honey	19'226	12'990	6.9	5.6
07	Coffee, tea, cocoa, spices etc.	34'365	32'824	12.4	14.2
08	Feeding stuff for animals (ex. unmilled cereals)	20'038	319	7.2	0.1
09	Miscellaneous edible products and preparations	8'942	4'643	3.2	2.0
11	Beverages	7'030	1'636	2.5	0.7
22	Oil seeds and oleaginous fruits	24'802	6'487	8.9	2.8
29	Crude animal and vegetable materials, N.E.S.	4'224	12'637	1.5	5.5
42	Fixed vegetable fats and oils	7'996	855	2.9	0.4
43	Processed animal and vegetable fats and oils	778	-	0.3	-
	Other products ¹	851	356	0.3	0.2

¹ Contains goods from commodity groups 51, 55 and 59.

4 Concluding remarks

When planning the new survey *Foreign trade in organic products*, it has been possible to minimise the response burden due to the fact that there are only two government bodies which certify farmers and business enterprises using a common business number and this business number is also used when compiling foreign trade statistics. This is an important prerequisite to integrate the survey into the Danish National Statistical System. Not all countries are in such a favourable position, but when creating a new survey Statistics Denmark seek as much as possible to integrate it into the National Statistical System.

Plenary: Defining a European Framework for a European Organic Market Information System

Chair: Raffaele Zanoli¹

¹ Prof. Raffaele Zanoli, Polytechnic University of Marche, Via Brecce Bianche, I-60131 Ancona, Italy. Internet agrecon.unian.it/zanoli/zanoli.htm

Institutional structures for EISfOM

Markus Rippin¹, Nicolas Lampkin² and Raffaele Zanoli³

Current situation and organisational issues

As one of the major outcomes of the EISfOM project it must be stated that in all the areas investigated (production, financial data, consumption, prices, supply balances and trade), there is an urgent need for improving data quality and quantity about the organic market in almost every European country. Some countries do have systems which work quite well and could be used as reference systems for other countries. Nevertheless there is still a need to define a Europe-wide harmonised nomenclature and classification systems for production, consumption and price data. Eurostat is currently working on this issue in some areas. Some countries are already working with Eurostat to find common solutions that will meet both the national and international needs.

Eurostat is the central European coordinating organisation able to define common systems and infrastructure in order to achieve comparable data. As most of the data needed cannot be provided by the official national contact partner of Eurostat, other official and private organisations will have to be integrated into a wider network than that which is currently operated by Eurostat.

The EISfOM project team already has connections with those national organisations which could provide the data Eurostat and DG Agri need. As indicated above, there is still a need for central coordination between Eurostat/DG Agri, individual countries and other experts/market research institutes etc. with access to organic data, as well as co-ordination to initiate and accompany the harmonisation process.

DG Agri would benefit from these actions because available, checked and harmonised data (as far as possible), recorded in a central database and processed for the user needs would be made available by Eurostat.

Building a European organic data network

There are two different approaches that could be used to improve coordination and enhance current data availability and quality.

The first option would be to establish a European Advisory Group consisting of Commission, Member State and external experts, including researchers and stakeholders, to advise DG Agri and Eurostat on data collection issues. This option would require fewer resources to set up, but will not itself provide the basis for implementing the necessary changes as the main harmonisation and improvement of data availability would need to be carried out by staff within Eurostat and DG Agri, requiring additional resources within the Commission.

The second possibility involves the establishment of a European organic data network or observatory to act as a coordinating centre between Eurostat and the official statistical agencies on the one hand, and

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3 Prof. Raffaele Zanoli, Polytechnic University of Marche, Via Brecce Bianche, I-60131 Ancona, Italy. Internet agrecon.unian.it/zanoli/zanoli.htm

stakeholders and other data providers on the other. This more strategic and systematic approach is roughly visualised in Figure 1.

Recommended Information Flow for EU Organic Market Data

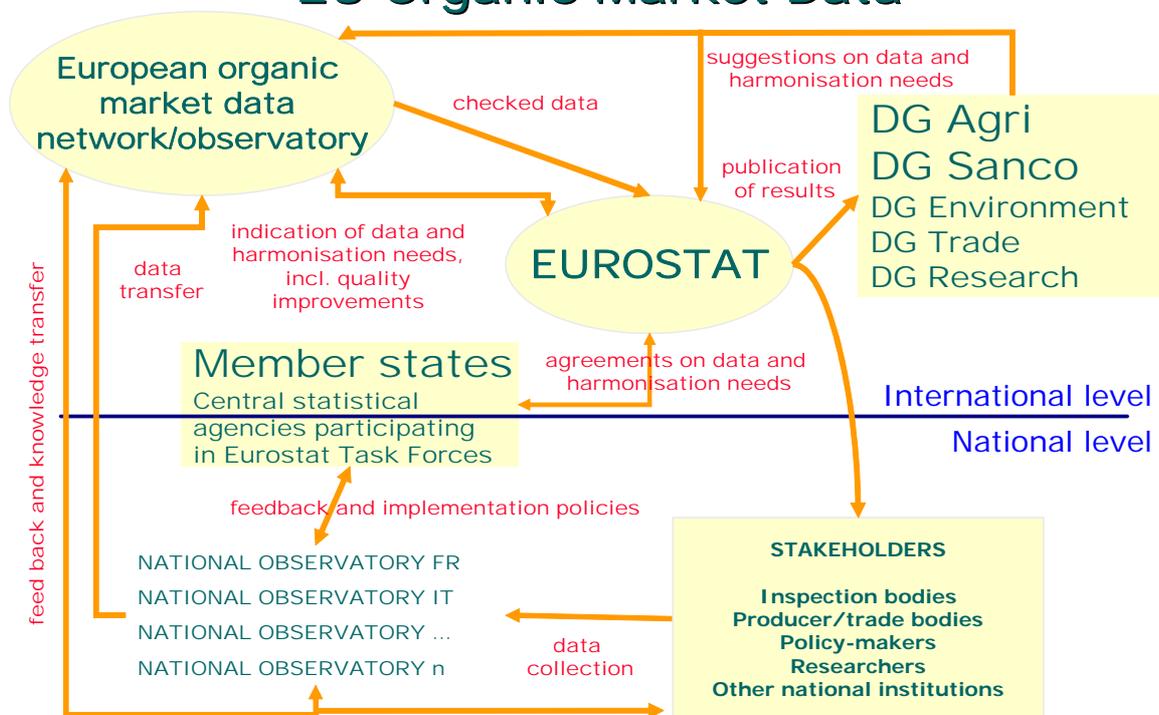


Figure: Suggested co-ordination structures and information flow for EU organic market data using a European network/observatory approach

The basic model for this concept is provided by the national observatories for organic agriculture that have been established in Italy, France (Agence BIO) and some other countries, the purpose of which is to create an up-to-date and comprehensive information tool for public institutions, producers and final consumers. These observatories typically involve a coordinated effort between different official agencies, research institutes and stakeholders: in the Italian case the Italian FADN liaison agency (INEA), along with the National Statistical Office (ISTAT), the Mediterranean Agronomic Institute (IAM-B) and the Institute of Services for Agriculture and Food Market (ISMEA), is involved in the Observatory. As well as ensuring that the broad range of data collection needs are addressed, such networks or observatories also provide a valuable opportunity for the integration of effort and better use of resources.

At the European level, a network or observatory of this type would still need to be centred primarily around the European Commission, including DG Agri, DG Sanco etc. as well as Eurostat and Member State official statistical agencies. But the network would also formally integrate the research institutes, universities, market research companies, independent experts/consultants, certification bodies and other stakeholders that currently either own, collect or process organic data. This is seen as important given their combined experience and understanding of the specific needs and circumstances of the organic sector.

This European network/observatory would be responsible for:

1. agreeing data needs and DCPS development priorities
2. developing and implementing Eurostat-harmonised systems at the European level (with the emphasis on output harmonisation so that national systems can be appropriately developed and adapted)
3. investigating possibilities for improving data quality or implementing adapted reference systems in countries and areas where no data are available
4. working with Eurostat and data providers to collate data, monitor quality and facilitate dissemination.

Time, cost frames and funding

The establishment of such a network/observatory would require a commitment to the provision of core resources for central staff as well as to support the participation of stakeholders and external experts in the network. This commitment would need to be long-term – certainly longer than the usual DG Research project duration of three years. An initial commitment of resources for seven years (corresponding to the Commission's 2007-2013 planning period) would be appropriate, whilst a longer period would be ideal but perhaps unrealistic.

For each main area (production, financial data, prices, consumption, trade and supply balances), it is suggested that one (part-time) expert coordinating the work with Eurostat and the individual countries would be needed, supported by four or five staff members responsible for administration and management.

In each country it will be necessary to pay private organisations for their contributions. While participation in coordination meetings might be an issue for central funding, the provision for data costs is more likely to be an issue for national budgets.

In addition, some resources for development work and underpinning research could be made available by DG Research for specific projects (SSP/STREP).

Building European Knowledge: Towards the Seventh Framework Programme 2007-2013

Danielle Tissot¹

<p>FP7 (2007-2013): Proposed Structure</p> <p>Seventh Framework Programme Specific Programme „Cooperation“ Theme 2 „Food, agriculture and biotechnology“ Annual workprogrammes</p> <p>Framework Programme proposed by the European Commission on 6 April 2005 Specific Programmes proposed by the European Commission on 21 September 2005</p> <p>RTD/E 2005</p>	<p>Specific Programmes</p> <p>Cooperation – Collaborative research Ideas – Frontier research People – Human Potential Capacities – Research Capacity + JRC (non-nuclear) JRC (nuclear) Euratom</p> <p>RTD/E 2005</p>																						
<p>Commission Proposal</p> <p>4 Components I. Cooperation</p> <table border="1"> <thead> <tr> <th></th> <th>Budget (€million)*</th> </tr> </thead> <tbody> <tr> <td>– Projects and networks within 9 themes</td> <td></td> </tr> <tr> <td>1) Health</td> <td>8.373</td> </tr> <tr> <td>2) Food, agriculture and biotechnology</td> <td>2.472</td> </tr> <tr> <td>3) Information and communication technologies</td> <td>12.756</td> </tr> <tr> <td>4) Nanosciences, nanotechnologies, materials and new production technologies</td> <td>4.865</td> </tr> <tr> <td>5) Energy</td> <td>2.951</td> </tr> <tr> <td>6) Environment (including climate change)</td> <td>2.552</td> </tr> <tr> <td>7) Transport (including aeronautics)</td> <td>5.981</td> </tr> <tr> <td>8) Socio-economic sciences and the humanities</td> <td>797</td> </tr> <tr> <td>9) Security and space</td> <td>3.987</td> </tr> </tbody> </table> <p>* for seven years</p> <p>RTD/E 2005</p>		Budget (€million)*	– Projects and networks within 9 themes		1) Health	8.373	2) Food, agriculture and biotechnology	2.472	3) Information and communication technologies	12.756	4) Nanosciences, nanotechnologies, materials and new production technologies	4.865	5) Energy	2.951	6) Environment (including climate change)	2.552	7) Transport (including aeronautics)	5.981	8) Socio-economic sciences and the humanities	797	9) Security and space	3.987	<p>Food, Agriculture and Biotechnology in FP7</p> <p>Three activities</p> <ol style="list-style-type: none"> 1) Sustainable production and management of biological resources from land, forest, and aquatic environments 2) “Fork to farm”: Food, health and well being 3) Life sciences and biotechnology for sustainable non-food products and processes <p>RTD/E 2005</p>
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¹ Danielle Tissot, Safety of food production systems, DG Research, European Commission, B-1049 Brussels

Food, agriculture and biotechnology: Objectives

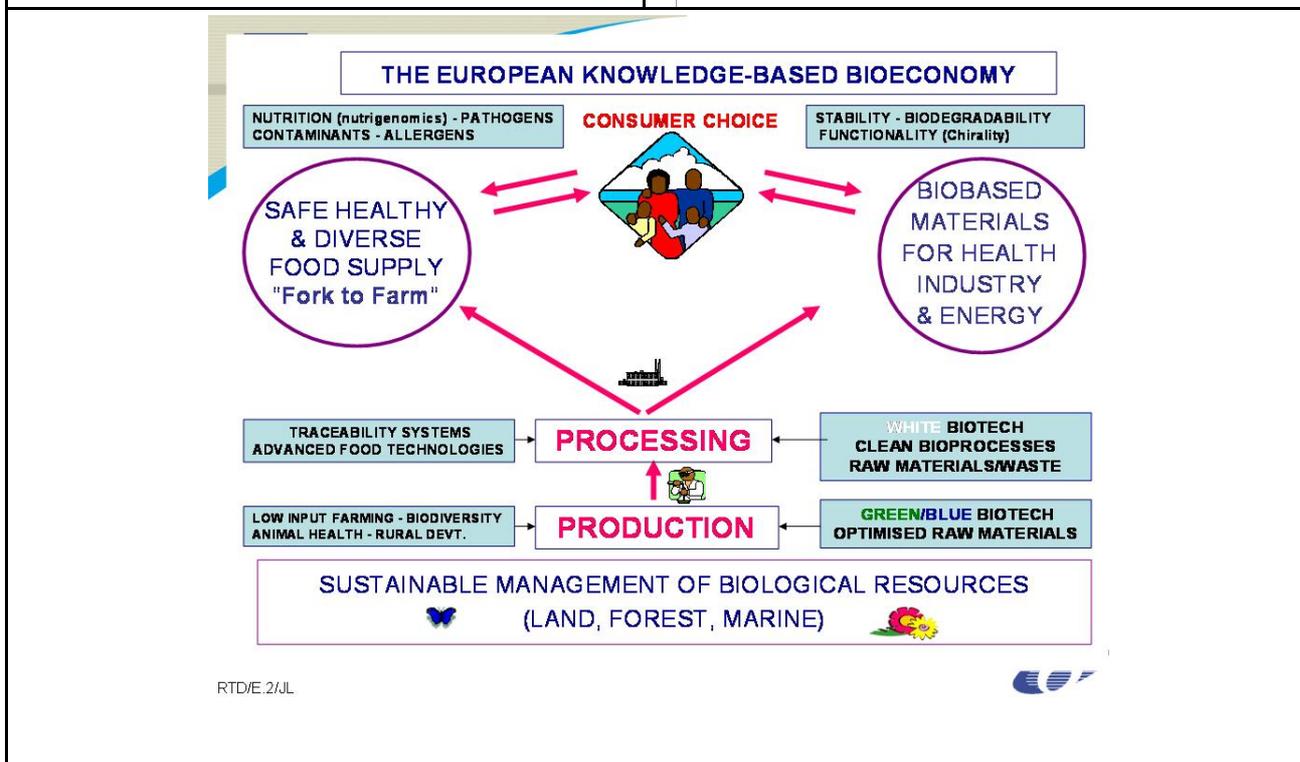
- Build a European Knowledge-Based Bio-Economy (KBBE)
- Respond to social and economic challenges:
 - High quality food and sustainable food production
 - Food-related disorders (cardiovascular, obesity ...)
 - Infectious animal diseases and zoonoses
 - Sustainable agriculture/fishery and climate change
 - Clean biomaterials from renewable bio-resources
- Involve all stakeholders (incl. industry) in research
- Support CAP and CFP
- Respond quickly to emerging research needs

RTD/E 2/JL

Food, agriculture and biotechnology: Rationale

- ✓ Biotechnology and food companies / SMEs need to be competitive on the world market ('European Strategy on Life Sciences and Biotechnology')
- ✓ Society demands safer and healthier food
- ✓ Renewable resources and biomass for non-food applications helps reducing dependence on hydrocarbon-based economy
- ✓ Society demands sustainable and eco-efficient production methods in agriculture/fishery/forestry
- ✓ International cooperation ensures optimal exploitation of resources and application of results

RTD/E 2/JL



Activity 1: Sustainable production and management of biological resources from land, forest, and aquatic environments

- Enabling research ('omics', converging technologies, bio-informatics, biodiversity) for micro-organism, plants and animals
- Sustainable, competitive and multifunctional agriculture, forestry, fisheries, and aquaculture
- Animal welfare, breeding and production; Infectious diseases in animals, including zoonoses
- Policy tools for the knowledge-based bio-economy, agriculture, fisheries, rural and coastal development

RTD/E 2/JL

Activity 2: "Fork to farm" - Food, health and well being

- Consumer and societal aspects of food
- Nutrition, diet-related diseases and disorders, nutrigenomics, food development
- Innovative food and feed processing and packaging, smart control, waste management
- Improved quality and assured microbiological and chemical safety of food and feed, detection methods, risk governance
- Environmental impacts on/of the food chain, total food chain concept

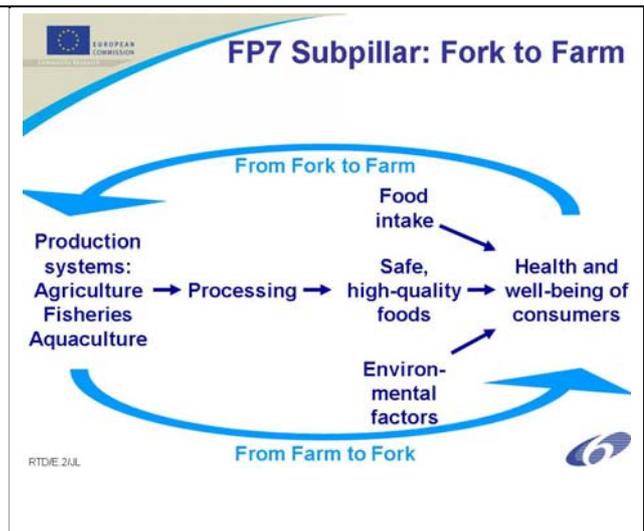
RTD/E 2/JL

**Activity 3:
Life sciences and biotechnology
for sustainable non-food
products and processes**

- Improved crops, feed-stocks, marine products and biomass for energy, environment, and high added value industrial products; novel farming systems
- Bio-catalysis; new bio-refinery concepts
- Forestry and forest based products and processes
- Environmental remediation and cleaner processing




RTD/E 2004



**Food, agriculture and biotechnology:
What's new?**

- ✓ Pillar 2 "Food, health and well-being" ensures continuity of FP6 "Food quality and safety" research
- ✓ **New:** Pillar 1 "Sustainable production and management of biological resources" and pillar 3 "Life sciences and biotech for sustainable non-food products and processes"
- ✓ Some topics under pillar 1&3 partly financed in FP4 and FP5 (BIOTECH, FAIR, QoL, etc.), but FP6 efforts scattered and not of sufficient critical mass (some activities under materials, energy and environment) providing no synergies
- ✓ Technology platforms in the area of plant biotechnology, animal breeding, global animal health, forestry, food and industrial biotechnology

RTD/E 2004

**Food, agriculture and biotechnology:
Borderline with other FP7 Themes**

- ✓ Enabling/systems biology research on plants, animals and microbes complementary to systems biology for human health applications in theme 1.
- ✓ Complementary research relating to the management/conservation of natural resources addressed under the "Environment including Climate Change" theme.
- ✓ Demonstration of bioprocesses for biomass conversion to energy/materials under this priority – up-scaling and complete process design under materials and energy themes

RTD/E 2004

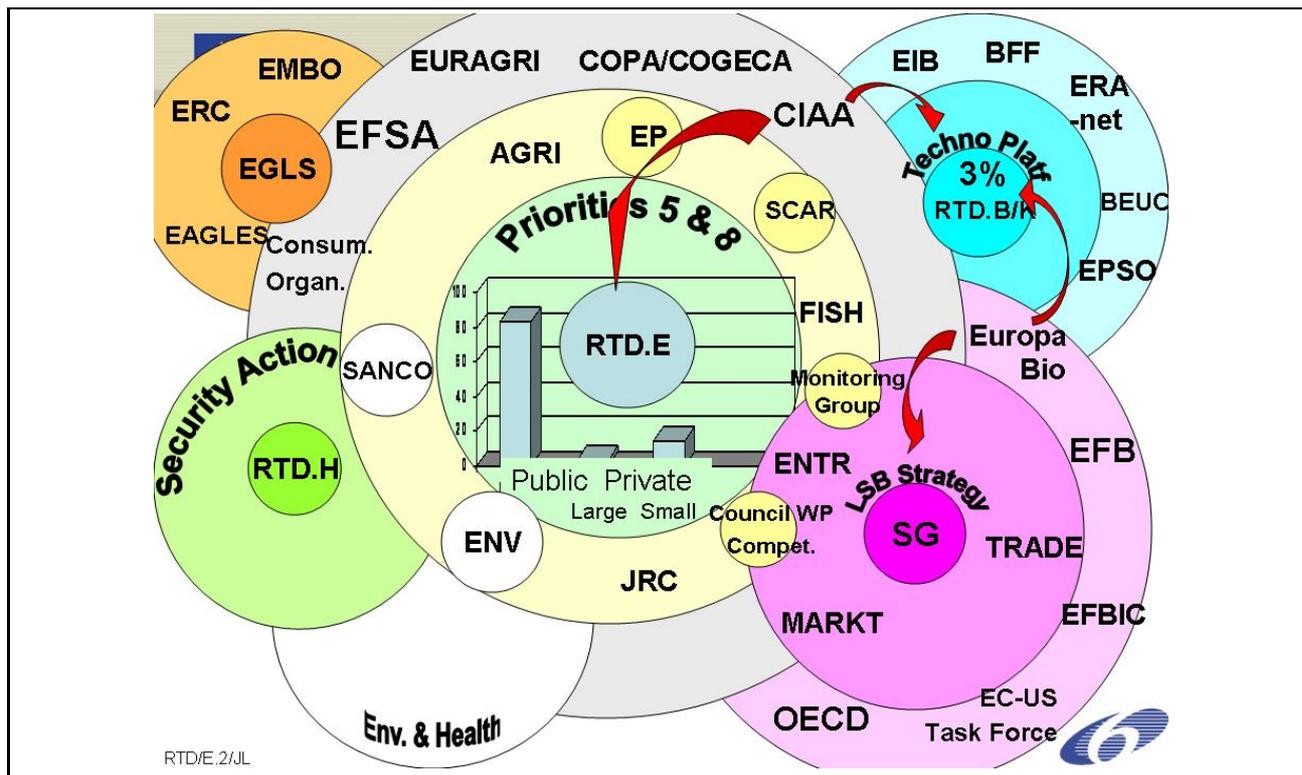
**Food, agriculture and biotechnology:
New Activities**

New activities within the themes:

- ✓ Integration of new and emerging science and technologies (NEST)
- ✓ Support to policy development (CAP, CPF, public health, food safety, animal health, ...)
- ✓ International co-operation
... to be defined on the level of the specific programme or workprogramme

RTD/E 2004

RTD/E 2004



EUROPEAN COMMISSION
Community Research

Key

<ul style="list-style-type: none"> • BEUC • BFF • CIAA • COPA • COGECA • EFB • EAGLES • EFSA • EGLS • EIB • EMBO • EPSO • ERC • EURAGRI • EuropaBio • LSB Strategy • OECD • SCAR 	<ul style="list-style-type: none"> • Bureau Européen des Consommateurs • The Biotech and Finance Forum • Confédération des Industries Agro-alimentaires • Committee of Agricultural Organisations in the EU • General Confederation of Agricultural Co-operatives in the EU • European Federation of Biotechnology • European Action on Global Life Sciences (activity promoted by EFB) • European Focus on Biotechnology in China (activity promoted by EFB) • European Food Safety Authority • European Group for Life sciences (advising P. Busquin) • European Investment Bank • European Molecular Biology Organisation • European Plant Science Organisation • European Research Council • The European Agricultural Research Initiative • The European Association for Bioindustries • The Life Science and Biotechnology Strategy • Organisation for Economic Co-operation and Development • The Standing Committee on Agricultural research
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RTD/E.2/JL

Conclusions of the 2nd EISfOM European Seminar

Nicolas Lampkin¹

The seminar and the work of the EISfOM project has clearly demonstrated the need for change with respect to the availability of organic market information and statistics. The size of the organic sector and its policy significance require and justify a significant improvement in data availability and quality – a combination of public and private sector resources will be needed to deliver this. The European organic food and farming action plan commitment to develop statistics and organic market information provides the focus for driving this forward, but this commitment needs carrying through to different units and national agencies.

Each of the working groups has presented detailed recommendations. These will be reported in detail in the final report of the EISfOM project (Rippin et al., 2006). The intention here is to highlight common issues arising in the different groups:

- definitions, nomenclature and classification systems need to be refined and harmonised in several areas;
- there is a need to prioritise products/farm types because not everything can be achieved with the limited resources available, but this also requires consistency between levels so that data on the same product can be tracked from one level to the next;
- there is a strong case for a legal requirement for data reporting by inspection/certification bodies and other businesses, covering not just production data but also data on inputs and outputs at other points in the supply chain;
- opportunities for linking statistical data sources should be exploited, for example as in the Danish system, or through closer linking of Farm Structure Survey, Farm Accountancy Data Network and EU Reg. 2092/91 administrative data using a common (farm census) identifier;
- there needs to be a careful assessment of the feasibility and prioritisation of proposals and potential for integration across the levels discussed;

A critical issue will be the resources available to fund any initiatives. Clearly any recommendations will need to be tailored to the available resources, but a mixed approach to funding should be considered. Central (EU) resources are potentially available for co-ordination and development work (e.g. Eurostat direct studies, Framework 6/7 Scientific Support for Policy and JRC capability development. But not all the funding should come from central sources and in many cases national resources will be required for implementation of any initiatives. In terms of public funds, there is the possibility of reducing the potential costs of organic information systems by building on existing systems (statistical and administrative), and by considering whether general agriculture sample sizes could be reduced to accommodate increased emphasis on organic farming. Private sector funds, from sale of data/reports, subscriptions, private contracts or the use of levy funds could also form part of the mix. In all cases, it is recognised that a higher priority would be given to organic data collection if increased use of existing data would create positive feedback loop to stimulate further action by data managers.

There is a need also to consider the institutional context. Different perspectives on the potential of a European organic observatory have been presented, but whatever the outcome, it is clear that Eurostat

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and DG Agri are central to any future activities, and that national statistical agencies will play an increasing role. But, particularly given the relative inexperience in this particular field of many of the national agencies, there is a need to fully integrate in a genuine partnership approach other parties who have not traditionally been involved in 'official' statistics, including in particular inspection/certification bodies, other research/ consultancy expertise and other stakeholders (data owners/users including producer organisations and policy-makers). This will include a willingness to integrate data collected by private sector organisations in an appropriate output-harmonisation framework to ensure statistical validity. To make this work well, there will be a need to examine options to promote networking and sharing of good practice.

As the EISfOM project is drawing to a close, the next steps will take place to a tight time schedule. The recommendations will be integrated into final EISfOM report to be presented to the European Commission early in 2006 – the draft will also be made available on the EISfOM membersnet to permit comments from seminar participants and other interested parties. The EISfOM project partners will meet with the European Commission in mid January to review the draft recommendations, with the final report submitted by the end of January 2006.

The EISfOM partners would like to encourage all participants to keep in touch and engaged in the process. The publication of these proceedings, and the presentation of the main projects findings to the European organic farming conference planned for Odense at the end of May 2006, will help make the case for specific improvements in organic market information and statistical systems, but all the project reports and background papers will continue to be available on the project website www.eisfom.org which will be maintained for some time after the end of the project, and the membersnet still provides an opportunity for communicating with others interested in this area.

I would like to thank all speakers, chairpersons, rapporteurs, partners and especially seminar participants for their contributions to and active engagement in the debates and their assistance in developing recommendations. I would also like to thank representatives from the European Commission for their plenary contributions and intensive engagement with the working groups. Thanks are also due to the EU Commission (DG Research represented by Daniele Tissot) for funding the EISfOM project and the seminar.

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Reference

Rippin, M., Vitulano, S., Zanoli, R. and N. Lampkin (2006) Synthesis and final recommendations on the development of a European Information Systems for Organic Markets. EISfOM project (QLK5-2002-02400) deliverable D6 submitted to the European Commission. www.eisfom.org/publications.

About the EISfOM Project

The project European Information System for Organic Markets (EISfOM) is a European Concerted Action, funded under the 5th Framework Programme for Research and Technological Development of the European Union (Quality of Life) – Key Action 5 Sustainable Agriculture, running from 2003 to 2006.

EISfOM aims to build up a framework for reporting valid and reliable data for relevant production and market data about the European organic sector in order to meet the needs of policy makers, farmers, processors, wholesalers and other actors involved in organic markets.

The following project reports are available at the EISfOM homepage www.eisfom.org:

- **European Information System for Organic Markets: “Data collection and processing systems (DCPS) for the conventional markets” and “Data collection and processing systems for organic markets”.** Includes Country Reports on Data Collection and Processing Systems (DCPS) in 32 European Countries (2004)
By Sjaak Wolfert, Klaas Jan Kramer, Toralf Richter, Gabriele Hempfling, Susanne Lux and Guido Recke. European Information System for Organic Markets / Agricultural Economics Research Institute (LEI), Wageningen, The Netherlands, Research Institute of Organic Agriculture (FiBL), Frick, Switzerland
- **Development of a European Information System for Organic Markets - Improving the Scope and Quality of Statistical Data. Proceedings of the 1st EISfOM European Seminar, held in Berlin, Germany, April 26-27, 2004 (2004)**
Edited by Guido Recke, Helga Willer, Nicolas Lampkin, Alison Vaughan. European Information System for Organic Markets / Research Institute of Organic Agriculture (FiBL), Switzerland
- **Report on Proposals for the Development, Harmonisation and Quality Assurance of Organic Data Collection and Processing Systems (DCPS) (2004)**
By Guido Recke, Ulrich Hamm, Nicolas Lampkin, Raffaele Zanolì, Susanna Vitulano and Santiago Olmos. European Information System for Organic Markets / University of Kassel – Agricultural and Food Marketing, Germany
- **Report on the Evaluation of the Pilot Case Studies Including National Working Papers on Pilot Applications (DCPS) in eight European Countries (2005)**
By Norbert Gleirscher, Markus Schermer, Marta Wroblewska and Sylwia Zakowska-Biemans. European Information System for Organic Markets / University of Innsbruck, Innsbruck, Austria
- **Draft Recommendations for a Framework for a European Information System for Organic Markets. Debated at the 2nd EISfOM European Seminar, Brussels, November 10-11, 2005 (2005)**
Edited by Markus Rippin and Nicolas Lampkin. European Information System for Organic Markets / Zentrale Markt- und Preisberichtsstelle, Bonn, Germany and University of Wales, Aberystwyth, UK
- **Towards a European Framework for Organic Market Information. Proceedings of the Second EISfOM European Seminar, Brussels, November 10 & 11, 2005 (2006)**
Edited by Markus Rippin, Helga Willer, Nicolas Lampkin and Alison Vaughan. European Information System for Organic Markets / Research Institute of Organic Agriculture (FiBL), Frick, Switzerland
- **Synthesis and Final Recommendations on the Development of a European Information System for Organic Markets (2006)**
Edited by Markus Rippin, Susanne Vitulano, Raffaele Zanolì and Nicolas Lampkin. European Information System for Organic Markets / Zentrale Markt- und Preisberichtsstelle, Bonn, Germany

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The main aim of the project is to develop a framework for the collection and processing of data on organic production and markets.

At the second EISfOM seminar, which took place in November 2005 in Brussels, a draft framework for a European Information System for Organic Markets was discussed and defined.

The proceedings of the seminar provide the papers presented, covering farm production, farm financial data, prices, consumers/consumption and supply balances/international trade.

Detailed project information is available at www.eisfom.org