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Report on the evaluation of the pilot case studies

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"Report on the evaluation of the pilot case studies"

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List of Abbreviations

AIAB .....Italian Association for Organic Farming
ARM ……..….Azienda Romana Mercati
BÖL .....German Program for Organic Agriculture
CA ……..Concerted Action
CAP .....Common Agricultural Policy
CB .....Certification Bodies
CBS .....Statistics Netherlands
CMA .....Central Marketing Association for German Agriculture Industries
CN ……Combined Nomenclature
COICOP.....Classification of Individual Consumption by Purpose
CSA ……...Central Statistical Office
DCPS .....Data Collection and Processing System
DEFRA ……..…..Department of Environment Food and Rural Affairs
DKK ……..Danish Krone
DS .....……Statistics Denmark
EAN .....European Article Number
ECHP .....European Community Household Panel
EEA .....Eastern European Accession Countries
EFRC .....Elm Farm Research Centre
EFTA .....European Free Trade Association
EU-CEE-OFP…….....Further development of European organic farming policies,
……with special emphasis on EU Enlargement
FADN .....Farm Accountancy Data Network
FAO .....Food and Agriculture Organisation of the United Nations
FBS .....Farm Business Survey
FGS .....Federation of General Stores
FSS .....Farm Structure Survey
GfK .....Growth from Knowledge
GIJHARS…....Agricultural and Food Inspection Poland
HBS .....Household Budget Survey
IAFE .....Institute of Agriculture and Food Economics
IFOAM…….....International Federation of Organic Agriculture Movements
ILO .....International Labour Organisation
IMF .....International Monetary Fund
IRS .....Institute of Rural Sciences, University of Wales, Aberystwyth
LEI .....Agricultural Economic Research Institute Wageningen
NACE .....Classification of Economic Activities in the European Community
OECD.....Organisation for Economic Co-operation and Development
OFCAP…….....Organic Farming and CAP Reform
OMIARD…….....Organic Marketing Initiatives and Rural Development
P .....Partner
PACIOLI…….....Panel in Accounting for Innovation
PDO .....Protected Designation of Origin
PGI .....Protected Geographical Indication
RVA .....Dutch Accreditation Council
SA .....Soil Association
SQL .....Structured Query Language
TARIC…….....Integrated Tariff of the European Communities
TNS .....Taylor Nelson Group
TSG .....Traditional Speciality Guaranteed

UN .....United Nations
UWA .....University of Wales, Aberystwyth
VAT .....Value Added Tax
VBA .....Visual Basic Application
WP .....Workpackage

1 Introduction

The development of the market for organic products has shown a significant increase over the last 10 years, both within Europe and worldwide. Hand in hand with the enlargement of organic cultivated areas all over Europe, the marketing of organic products has gained more and more importance within the food supply, especially in distribution via supermarkets, natural food stores, farmers markets as well as through on-farm marketing. As a result of this, the need for detailed and up-to-date market information has increased. For farmers, detailed market information is needed as a basis for decision-making on long term investments in production and processing facilities (e.g. glasshouses, housing, and machinery). For market actors such as processors and retailers, the identification of market trends and consumption behaviour is necessary to enable them to orientate their marketing strategies in line with the market development. Since European agricultural policy has a crucial impact on the development of organic farming in Europe, market information is needed to plan, and to adapt where necessary, the regional, national and European support programmes in order to achieve the specified goals most efficiently.

The current situation of market information systems on organic farming in Europe shows a substantial lack of information. Although previous EU-research projects such as OFCAP (FAIR3-CT96-1794) and OMIaRD (QLK5-2000-01124) have shown that regional or national data gathering takes place in many countries, the availability of detailed and current data on various levels, such as production, consumption, prices as well as trade, on the national as well as at the European level, is not satisfactory. The main problem areas identified in 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.

Within the EU-funded concerted action EISfOM (European Information System for Organic Markets, QLK5-2002-02400), the aim is to build a framework for reporting valid and reliable production and market data for the European organic sector in order to meet the needs of policymakers, farmers, processors, wholesalers and other actors involved in organic markets. Based on the previous research done in Workpackages 2, 3 and 4, this report focuses on the evaluation of pilot case studies in eight European countries, showing proposals for new and/or enlarged data collection and processing systems for organic markets in Europe.

This report is based mainly on the pilot application studies conducted in WP5. Following the description of objectives and the general approach of WP5 in Chapter 1, Chapter 2 focuses on the national pilot case studies, including a description of the relevant institutions and DCPS as well as an assessment of data quality. Chapter 3 provides an analysis of the DCPS investigated with regard to the problems and barriers involved with their practical implementation. Chapter 4 then analyses the critical points identified with regard to potential solutions for harmonisation of various DCPS at the national and international level. Chapter 5 deals with the analysis of the recommendations made in WP4, while Chapter 6 summarizing and concluding the results. As well as the national working papers on the results of the pilot application studies, this deliverable is also strongly linked to previous project deliverables, namely D2 "*WP2: Data collection and processing systems for conventional markets and WP3: Data collection and processing systems for organic markets"* (Wolfert, S. *et al*., 2004), deliverable D3 "*Report on proposals for the development, harmonisation and quality assurance of organic data collection and processing*

systems (Recke, G. *et al*., 2004) and the proceedings of the first European Seminar "*Development of a European Information System for organic markets – improving the scope and quality of statistical data"* (Recke, G. *et al*., 2004).

1.1 Objectives of WP5

According to the Technical Annex the aim of WP5 is:

- to co-ordinate pilot studies in key European countries (UK, DE, AT, CH, DK, IT, NL, PL) and at international level (Eurostat, FAO)
- to collate and evaluate the pilot study results with respect to the recommendations generated out of WP2, WP3 and WP4.

P3 (University of Innsbruck), assisted by P8 (Agricultural University of Warsaw) had the main responsibility for the coordination of the implementation of the pilot case studies by partners. P3, assisted by P8, prepared the report (D4) evaluating the results of the pilot application studies based on national working papers. The structure and content of this report were reviewed by all partners during the 4th project meeting organised by P8.

1.2 Approach and Methods

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 try to identify improved methods of generating reliable data and/or overcoming barriers to implementation of such improvements. To ensure the quality and significance of case study results, pilot applications were conducted by partners with strong involvement from national key players, such as inspection bodies, statistical affairs 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.

In Subworkpackage 5.1, P3 was responsible for coordinating the implementation of the pilot studies by partners and other national/international agencies. Based on the results from earlier workpackages, a first draft of a common framework was discussed at the 2nd project meeting and specified and finally agreed at the 3rd project meeting. The selection of pilot applications took into consideration partners' particular involvement and expertise as well as the need to ensure that all relevant data levels were represented in the survey (see Table 1). As the aim of WP5 was to coordinate rather than to conduct the pilot studies, and to collate and evaluate the results, each partner took responsibility for their own study. To ensure comparability and uniformity of the results, common guidelines for the evaluation of DCPS and for the national working papers were drawn up by P3 in association with P8. The detailed framework is specified in Appendix 2.

Table 1 Pilot applications and data levels

	Farm level (Production)	Farm level (incomes)	Retail level	Consumer level	Price level	Trade level	Supply chain level
P1 (UK)	X	X	X	X	X	X	
P2 (CH)			X	X			
P3 (AT)							X
P5 (DE)			X		X		
P6 (IT)					X		
P7 (DK)			X			X	
P8 (PL)	X	X					
P9 (NL)	X						
P10 (DE)			X		X		

In line with the requirements of Subworkpackage 5.2, all partners prepared national working papers on the barriers and problems encountered during this test period (see Appendix 1). The evaluation focused on the opportunities for standardising data collection (especially production data), approaches to overcoming weaknesses in data collection (as outlined in WP4), and identifying improved methods for generating reliable data and/or overcoming barriers with regard to implementation of such improvements, as well as identifying national core institutions for future data collection and processing systems.

For the analysis the case study results were split into several sections. The DCPS was first 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. The third step was to revise the recommendations generated from WP2/WP3 and particularly from WP4. Finally, the findings were summed up in specific recommendations for the development and improvement of data collection and processing systems for organic markets.

2 Pilot applications

2.1 Farm level (production)

2.1.1 DEFRA – United Kingdom

Interview partner(s):	Contact details:
Michael Rowland, Statistics Officer	DEFRA Statistics Division Peasholme Green, York E-mail: Michael.rowland@defra.gsi.gov.uk Homepage: www.defra.gov.uk

The Department of Environment Food and Rural Affairs (DEFRA) is the government ministry responsible for agriculture and agricultural statistics in England, with some functions also at a UK level. Since 2002, following the publication of the English Action Plan for Organic Food and Farming, DEFRA has become more actively involved in collection and publication of organic farming statistics at different levels. It works with private sector organisations, in particular organic certification bodies and the Soil Association charity to collect data, with information published on its website (http://www.defra.gov.uk/farm/organic/introduction), although there is limited direct funding for this work (ca. 0.75 FTE staff time is resourced within the statistics division). Some work is also carried out through DEFRA commissioned research, in particular horticultural market research by HDRA (Firth *et al.*, 2005) and organic farm business data surveys by the University of Wales, Aberystwyth (Jackson *et al.* 2005).

The data generated by DEFRA is published via their website (see above) as well as in their annual *Agriculture in the United Kingdom* publication. It is also utilised in the Soil Association's annual *Organic Food and Farming Report* and the UWA/EFRC *Organic Farm Management Handbook* (published every 1-2 years). Tailored responses are also made to ca. 100 ad hoc requests for information each year.

In addition to the direct support for staff time in the Statistics Division and the commissioned research, payments are also made by DEFRA to certification bodies in return for the provision of data, amongst other activities. These payments are part of a general grant to the organisations based on the number of registered operators, for services to support DEFRA's work. In the past, actual amounts for specific tasks such as the provision of data were not specified, with the result that pressure to deliver could only be applied indirectly through the policy division. This could impact on the efficiency with which data can be collected. From the financial year 2005/06 the agreements covering these payments do clearly state what information certification bodies are required to provide and also state that "If performance of the Certification Body does not meet requirements of this Agreement it will result in non-payment of Grant".

DEFRA's Statistics Division works with the ten main UK certification bodies to obtain comprehensive production data directly, rather than through the Farm Structure Survey (Agricultural Census). Data are collected from the certification bodies annually relating to the situation at the first of January each year. The selection of crop and livestock areas is governed firstly by DG Agri/Eurostat reporting requirements, but is also influenced by the different data categories and IT systems

operated by the data providers. DEFRA has attempted to increase the level of standardisation between data providers, but resource issues relating to modifying IT systems have restricted progress and a degree of standardisation and validation needs to be undertaken centrally to obtain a consistent data set. Despite this, reliance on administrative data obtained from certification bodies is seen as more accurate than survey approaches such as the Farm Structure Survey/Annual Census.

The following table provides an assessment of data quality (as defined by Eurostat, 2003) based on the interviewees' opinions and expert assessment.

Table 2 Assessment of data quality DEFRA (farm level)

Relevance	High, as primary data collected directly from holdings, although useful information such as production quantities still not available and complete information on livestock numbers only becoming available for the first time from 2004. Some estimates were published relating to 2003, but these restricted the possibility of producing regional breakdowns.
Accuracy	High, but entirely dependent on certification bodies and the quality of their procedures – there is no direct control on the accuracy of data collection by inspectors, and the categorisation of data can be insufficiently specific (e.g. 'vegetables' or 'other crops'). While DEFRA has been working with them to improve this, changes to categories are imposed by the policy division and there can be significant time lags before a full picture of new items is obtained. There were some problems with the accuracy of the 2003 livestock data published in 2004, due to the missing data problems indicated above.
Timeliness and punctuality	Timeliness is influenced by the annual inspection cycle, so that some data may be up to one year old at the time they are requested, but this is unavoidable with this approach. Punctuality can also be affected by delays in receiving data from certification bodies, and by the amount of modification needed to reconcile the different formats provided and clarify data uncertainties, so that the process may take six months to complete.
Accessibility and clarity	There is good accessibility to raw data, but disclosure rules mean that data can be released or published only if a minimum of five cases are available.
Comparability	Comparability is high – the fact that this is administrative not survey data is not seen as a problem. Harmonisation with the FSS has been planned but not implemented due to staff changes. This would permit linking of additional data (e.g. labour, non-farming activities) and comparisons with conventional data. The main problem has been the lack of holding numbers for some returns from certification bodies as well as some issues relating to data confidentiality.
Coherence	This is improving as the systems become established, but the procedures are too recent to ensure a high level of data coherence and consistency over time.

2.1.2 SKAL Netherlands

Interview partner(s):	Contact details:
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Skal is the main inspection and certification body for organic production in the Netherlands. Under the authority of the Ministry of Agriculture, Nature and Food Safety, Skal audits organic farms, processors and importers (from outside the European Union). Since 2002 Skal has been part of the Foundation Skal International, where an Executive Committee of independent people and representatives of the organic sector is responsible for the definition of certification programs for organic production and processing. The certification program is supervised by the Dutch Accreditation Council (RVA) and regulated by the legal framework of the Ministry of Agriculture, Nature and Food Safety. Alongside the physical audits of organic production in the Netherlands, Skal International is also involved in the certification of sustainable forest, wood and textile production as well in certification of organic production abroad, e.g. for Bio-Suisse in Switzerland.

In 2003 Skal began to develop a new system to collect data on organic farms and companies aiming primarily to facilitate the inspection and certification process. Whereas before 2003 information about organic companies was mainly obtained from statement letters, in 2003 and 2004 Skal began systematically to use data gathered through the inspection process. This new development aimed at gathering information on the structure and management of farms and companies in order to provide better information on current market trends and developments. Only those companies and farms which are not visited before August still receive a statement letter to be completed and sent back to Skal.

On farm production level, the Skal DCPS contains information on the number of organic farms and the surface of organic and in conversion land as well as various data divided into categories according to the Skal tariff system (see the national working paper on Skal in Appendix 1). The information is gathered during the inspection process and stored in an Excel model which is then used to send invoices to the respective farmers and companies. Although quite substantial, the current DCPS still does not contain a harmonised system for registration of the area under specific crops. The DCPS also holds information on the number of processing and importing companies as well as on annual turnover divided into specific categories and sub-categories (see also Appendix 1).

The results of the data gathering exercise are published by Skal in conjunction with the Agricultural Economics Research Institute in Wageningen (LEI) via the Ekomonitor in the form of an annual report. This annual report (also available on www.platformbiologica.nl) contains information about the number of organic farms (by farm type), crop areas, numbers of animals (livestock holdings) and numbers of processing and importing (from outside the EU) companies. On the Skal website (www.skal.com) the addresses of organic farms and companies are published and regularly updated.

The following table provides a basic assessment of data quality based on the interviewees' opinions and expert evaluation.

Table 3 Assessment of data quality Skal (farm level)

Relevance	The Skal DCPS mainly meets their need for information on the structure and management of organic farms and companies. For external users, the DCPS at the moment does not provide a complete overview with regard to the classification of Council Regulation (EEC) No 2092/91.
Accuracy	The DCPS provides an adequate overview of the activities of farms and affiliated companies, areas under organic husbandry (converted and in conversion) and on specific groups of crops and animals.
Timeliness and punctuality	Skal aims to have a complete overview around August/September each year. The complete dataset is sent to LEI at the end of the year and published at the beginning of the following year.
Accessibility and clarity	Data on organic farms in the Netherlands are published by LEI once a year via the annual Ekomonitor. Additionally data on the number of organic companies and the number of certificates is available via the Skal website.
Comparability	The DCPS is mainly used to assess the development of organic farming in the Netherlands. Due to differences in the classification of products the DCPS at present is not comparable with other European statistics, except on a higher aggregation level.
Coherence	All annual and quarterly reports are based on data from the same source and collected in the same way.

2.1.3 Agricultural and Food Quality Inspection - Poland

Interview partner(s):		
Main Inspectorate of the Agricultural and Food Quality Inspection (GIJHARS)	The Institute of Agriculture and Food Economics (IAFE)	The Central Statistical Office (CSO)
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The Agricultural and Food Quality Inspection, which is the supervision agency for certification bodies in Poland, is involved in the development a DCPS gathering administrative data according to Council Regulation (EEC) No 2092/91. The main task of the DCPS being investigated was the development of a specific database named "Computer system for organic production, registration, inspection and certification", which will become operational in 2005. Particular attention was also paid to the links with other data sources on organic farming at the production level,

especially the FSS conducted by the Central Statistical Office and the FADN, for which the Institute of Agriculture and Food Economics is responsible. Plans also exist to set up a common identification number for farms and enterprises in order to link various data sources and make them comparable. Therefore one task was to evaluate how the institutions involved in administrative and statistical data collection view the advantages and disadvantages of the establishment of a common identification number.

The Agricultural and Food Quality Inspection was established by virtue of the act of 21 December 2000 on the commercial quality of agri-food products and reports to the Minister of Agriculture and Rural Development. With Poland's accession to the European Union, the act of 20 April 2004 on organic farming (O.J. No. 93, item 898), defining tasks and competencies of official bodies and organisational units in respect of organic farming, became operational.

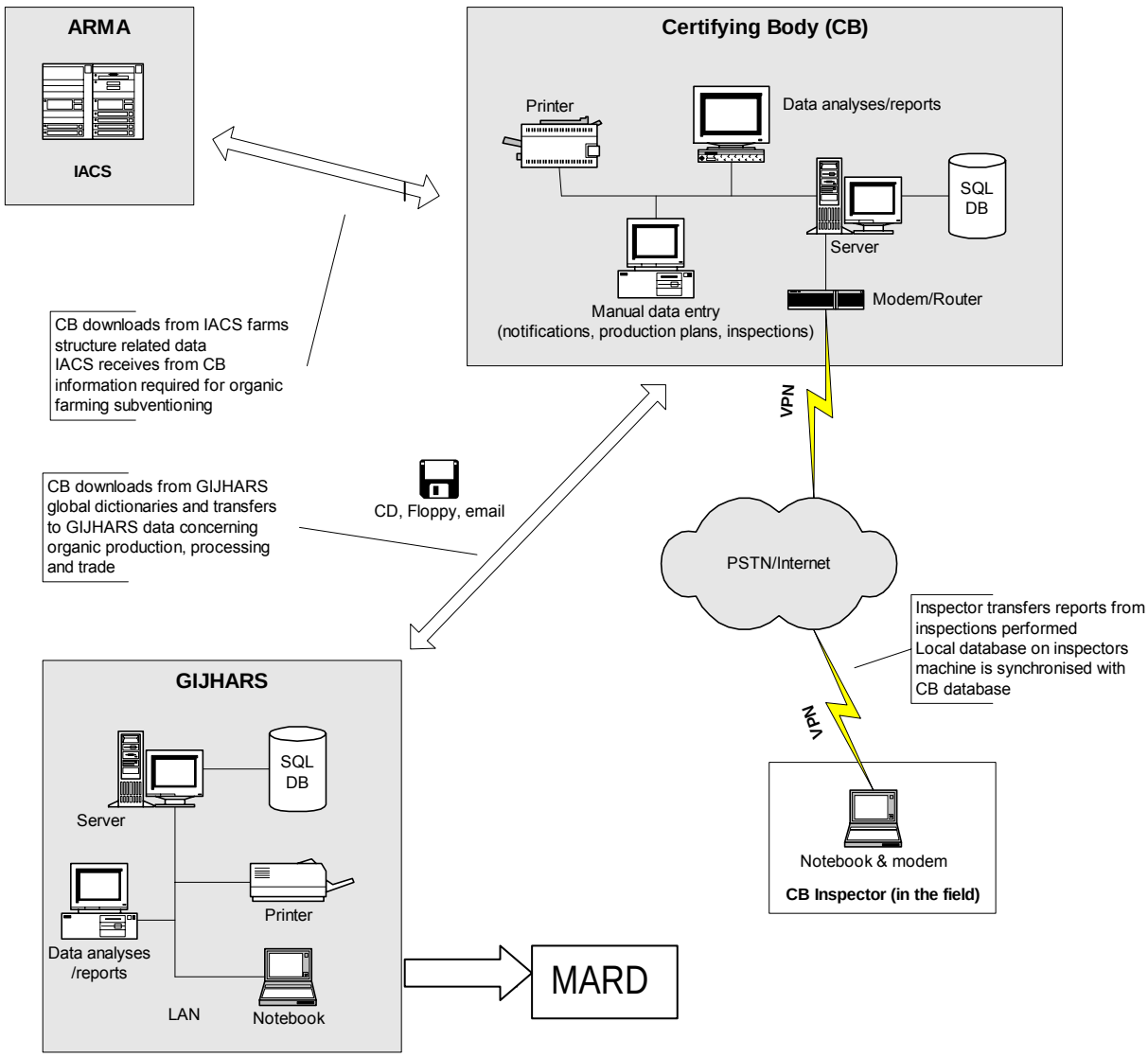
The main tasks of GIJHARS include, among others:

- to supervise the quality of agri-food products in production and marketing including exported and imported goods,
- to evaluate the quality of agri-food products including their certification,
- to control storage and transport conditions of agri-food products,
- to collect and process data on agricultural markets,
- to cooperate with organisational units related to the Common Agricultural Policy,
- to conduct training on regulations and requirements related to the commercial quality or determination of quality classes as well as on examination methods of agri-food products,
- to define and perform specific tasks resulting from the act on organic farming.

As the Polish system of inspection and certification by law is partly a private and partly a governmental responsibility, the following institutions are responsible for its enforcement:

- the Minister of Agriculture and Rural Development authorises certification bodies to perform inspections, and subsequently to issue and withdraw certification;
- the Main Inspectorate of the Agricultural and Food Quality Inspection (GIJHARS) supervises certification and inspection bodies;
- certification bodies (CB) obtain data on organic farms and processing plants, issue certificates and carry out inspections; they can also enforce sanctions.

Figure 1 Data transfer and the institutions involved



Glossary:

GIJHARS	The Main Inspectorate of the Agricultural and Food Quality Inspection
ARMA	Agency for the Restructuring and Modernization of Agriculture
IACS	Integrated Administration and Control System
CB	Certification bodies
MARD	Ministry of Agriculture and Rural Development

Within its supervision activities, the Main Inspectorate of the Agricultural and Food Quality Inspection

- performs an analysis of the data provided by the certification bodies,
- controls the certification bodies,
- may require from the certification bodies any additional information necessary for the effective supervision of organic producers,
- may control organic producers.

By 31 January each year all certification bodies are obliged to send a list of inspected producers to GIJHARS as well as to report on their inspection and certification activities.

With the aim of improving DCPS on the farm level, the Main Inspectorate of the Agricultural and Food Quality Inspection (GIJHARS) participated in the PHARE project PL 01.04.04 "Organic Farming", within which a specific "*Computer system for recording, certification and inspection for organic farming"* was developed. It is planned, that the DCPS will cover all operators in the organic food chain, starting with producers and ending with retailers (e.g. canteens). The main aim of this new system is to:

- enable the recording of the activities of organic farms and companies in plant and animal production, processing, import of organic products, the collection of wild plants and the marketing of organic products;
- support the process of issuing and recording of certificates;
- register annual production plans for plant and animal production, processing, collecting (e.g. wild herbs) and import by certification bodies;
- support the planning and implementation of the inspection process as well as the facilitation of data recording and storage;
- enable the required information transfer from the certification bodies to the Agency for the Restructuring and Modernisation of Agriculture (ARMA) as a basis for the public support programme for organic farming;
- enable data transfer from the certification bodies to GIJHARS.

The following table provides an assessment of data quality based on the interviewees' opinions and expert assessment.

Table 4 Assessment of data quality for GIJHARS (farm level)

Relevance	The range of data stored in the database is rather wide; it was reviewed with certifying bodies and obtained a positive reaction.
Accuracy	It seems to be quite difficult to check the accuracy of data because it depends on the quality of the data collected by the certification bodies. Within the DCPS, however, gross errors can be detected automatically.
Timeliness and punctuality	Timeliness and punctuality will depend to a great extent on the employees of the certification bodies as data will only be transferred once a year (by 31 January).
Accessibility and clarity	Access to data is granted only to authorised employees of the GIJHARS (who have the access code); other interested persons can be granted access on request to the Chief Inspector of the GIJHARS. Clarity is not yet fully specified, special dictionaries with definitions related to individual types of activity are being developed.
Comparability	The system significantly broadens the range of data collected on organic farming; since this kind of data is going to be collected for the first time it is difficult to assess data comparability.
Coherence	It is still too early to make an assessment

2.2 Farm level (income)

2.2.1 DEFRA – United Kingdom

DEFRA Economics Division is normally responsible for this area of activity, but has not been actively involved in the analysis of organic farming incomes. P1 is currently contracted to collect supplementary data and to analyse the combined organic farming data set, but the contract is due to expire in early 2006. The intention is that the data collection work will be fully integrated with Farm Business Survey activities from 2006, but this requires a review of the identification and composition of the organic sample within FBS to ensure representative data is obtained.

At the moment data is being collected directly by the IRS (P1) Farm Business Survey team from ca. 70 holdings across England and Wales for the periods 2001/02 to 2003/04, with an extension to cover 2004/05 likely. Previous work (separate projects) has covered the periods 1994/5 to 2000/01. The aim is to ensure that, for each of the main holding types, a minimum sample size of 10-12 holdings is achieved. For pigs, poultry and some horticultural holdings, only enterprise data (gross margins) is being collected as very few organic specialist holdings of this type exist.

Data collected by other FBS Centres (as part of the normal FADN sample) are supplied to IRS by DEFRA for inclusion in the analysis. This is helping to significantly increase the number of holdings that can be analysed, but there are also some limitations to this data.

Comparative data for the combined samples of data collected directly by IRS and by other FBS Centres are also extracted from the data supplied to IRS by DEFRA, using a modified (non-Euclidean) clustering procedure. This procedure is described in detail in the annual project reports.

Until now, results have been published on the Organic Centre Wales website (www.organic.aber.ac.uk) as downloadable PDF files. However, agreement in principle has now been reached with DEFRA that all reports will be published on the DEFRA website (organic farming statistics section) and it is hoped that this will take place by end of July 2005 (these reports will go onto organic E-prints as well).

The following table provides an assessment of data quality based on a review of current issues by the P1 team carrying out the surveys.

Table 5 Assessment of data quality DEFRA (farm income level)

Relevance	High – financial data is important both for producer decision-making and for determining support levels under the organic farming scheme.
Accuracy	The detailed survey procedure involves direct access to farmers' accounts and bank statements, so that there is a high degree of accuracy involved.
Timeliness and punctuality	At present, timeliness and punctuality are both poor, with 2002/03 being the latest data set completed and 2003/04 data expected in autumn 2005. One factor is that in the UK most farmers' accounting years end in the period January to March, so that their accounts are available only during the peak work periods. Secondly, the team collecting the organic farming accounts has to prioritise the main FADN work first. There have also been internal delays in the project which are now resolved. Procedures are being implemented which will allow earlier collection and reporting of the organic farm data, with 2004/5

	data available in June 2006, but in the long term the main solution would be full integration of data collection in the main Farm Business Survey
Accessibility and clarity	Data are published according to clear definitions, and with publication on the DEFRA website accessibility will also be high.
Comparability	Because Farm Business Survey/FADN procedures are adopted for the survey, the data are fully comparable with other FADN results. The methods developed to select comparable conventional holdings have also helped to improve the level of comparability between groups of organic and other farms.
Coherence	This is currently low because of the different projects which have supported data collection in the past. However, as the current project progresses, the situation will be improved.

2.2.2 The Institute of Agriculture and Food Economics (IAFE) - Poland

The Institute of Agriculture and Food Economics is an independent scientific establishment created in 1983. It mainly conducts empirical research related to the analysis of the national agro-economy and its segments, including the market for agri-food products, the economics of agricultural holdings as well as production means. In addition, it deals with companies and traders involved in the food industry, the effects of ownership transformation, spatial aspects of food economy, social change occurring among the rural and agricultural population and the influence of the accession to the European Union.

The establishment of a DCPS on farm incomes is coordinated by the IAFE, integrating accountancy offices, accountancy advisors and farmers on the basis of annual agreements. It was assumed at first that the manager of the accountancy office at the regional (Voivodeship) level would conclude a collective agreement with IAFE to collect data from randomly selected farms according to their location. The act of the 29 November 2000 on the collection and use of accountancy data from agricultural holdings specifies that the accountancy office, with which the agreement to collect data is concluded, must guarantee objective and reliable transfer of accountancy data. It was decided that from 2005 the function of accountancy office would be taken over by Agricultural Advisory Centres which are controlled by the Voivode.

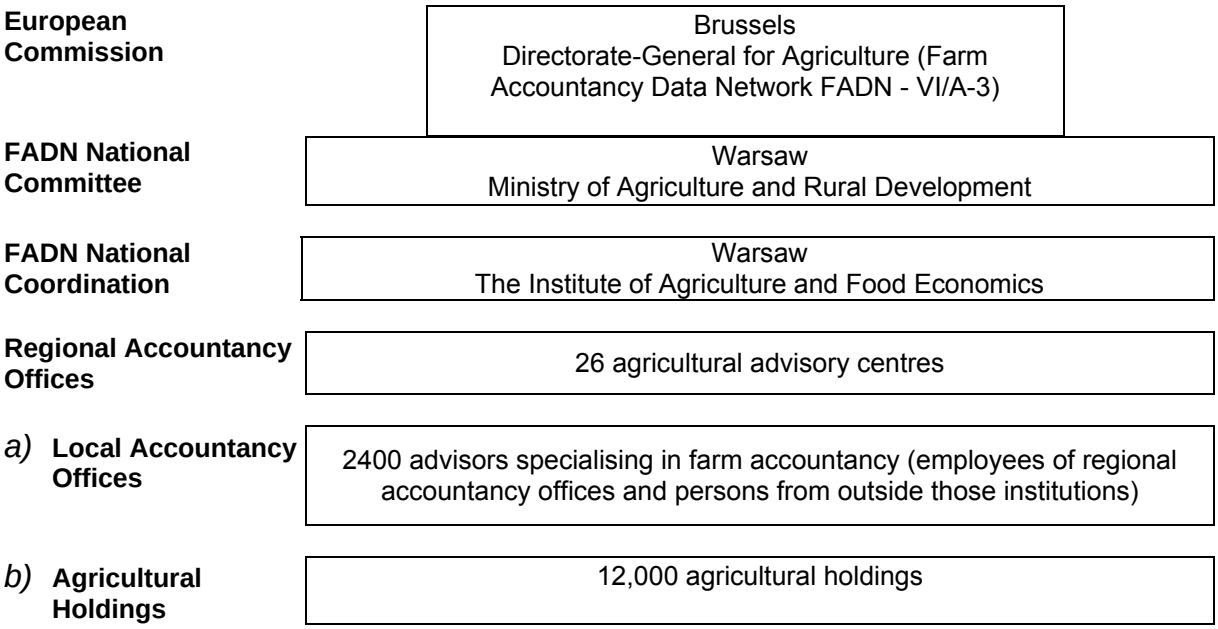
It is assumed that the institutions currently cooperating with farmers can take on the function of accountancy offices on the regional level, namely:

- the Regional Advisory Centres for Agriculture and Rural Development – under the aegis of the Minister of Agriculture and Rural Development;
- the Agricultural Advisory Centres – under the aegis of the Voivode;
- the Regional Agricultural Chambers – independent institutions.

In accordance with the legislation, agreements concluded between the system participants will specify the frame for the collection of farm accountancy data, and in particular the time frame for data collection and processing as well as data security matters (concerning both agricultural holdings and personal data confidentiality) has to be considered. The task of the IAFE – as the coordinator of the DCPS – is therefore mainly to effect agreements on accountancy data collection from

representative agricultural holdings. In order to obtain high quality data, a separate data quality control system was developed specifically for that purpose. Independently, data are entered into a European database RICA 1 and a test of accountancy data included in the Farm Returns is carried out. Within this process there are also checks on calculation errors, missing data and unacceptable values. Data which contain certain or likely errors are returned to IAFE to be verified. On the basis of the data accepted into the collective database, the team responsible for the FADN draws up reports containing standard results and special analyses. The procedures applied provide for the use of resulting values calculated according to unified formulas, regardless of those applied in individual Member States.

Figure 2 Organisational structure of FADN in Poland



The following table provides an assessment of data quality based on the interviewees' opinions and expert assessment.

Table 6 Assessment of data quality IAFE (farm income level)

Relevance	Data standards were defined in the regulation addressing the FADN issues (Regulation 79/65/EEC of 15 June 1965); relevance is good
Accuracy	Data are precise, controlled by special computer systems and, before that, also by an advisor who verifies the data just after the control on the farm
Timeliness and punctuality	Timeliness and punctuality are satisfactory; all issues are specifically determined in laws and regulations
Accessibility and clarity	Accessibility of data is restricted to authorised persons. The clarity of data is good, intelligible definitions and terms are used and are defined in the annex to the regulation
Comparability	Data are fully comparable as they derive from a permanent survey that has been conducted for many years using the same accounting period
Coherence	Coherence is adequate

2.3 Price level

2.3.1 ZMP- Germany

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The ZMP producer and wholesale market price reporting covers most of the important agricultural product groups, with data normally gathered weekly. For conventional products data collection is carried out by separate departments (for fruit and vegetables; animals and meat; poultry, milk and milk products; arable crops) and whereas for most products only prices are collected, for some quantities are also recorded (e.g. for processed products). Prices are collected at different marketing levels depending on the particular market structure. As well as data collection from wholesale markets, information on prices is also gathered directly from producers, for example on direct marketing activities, sales to retailers and/or wholesalers, from producer organisations, packaging stations, slaughterhouses and from mills or dairies. Data are also collected according to some other criteria such as the marketing level (consumer, retailer, processor, and wholesaler) or according to product specific criteria (quality, size, packaging units and origin). Within the DCPS it is also possible to differentiate the data according to administrative units (e.g. federal states).

Data on organic product prices are not usually integrated into the conventional price collecting DCPS, nor are they distinguishable from total data. Instead for most product groups a separate DCPS is run by the Department of Organic Farming in the ZMP. There are a few exceptions where data on organic markets are gathered by conventional systems as well (e.g. for apples, carrots, chicken, milk prices and pig prices). The main reasons for not integrating organic data collection into total data collection were:

- a very low market share of organic products (< 2 % in DE);
- organic products are not traded on traditional wholesale markets/ producer organisations; organic markets usually have their own distribution structure;
- conventional market participants are not interested in organic market data;
- insufficient human resources in the conventional departments;
- organic market participants are not interested in providing data to the conventional market; they fear a decline in price when having to compete with conventional markets.

The frequency of price data collection for organic products depends mainly on the market situation: prices for fruits, vegetables, herbs and potatoes are collected weekly, prices for cereals and milk monthly, and meat prices on a quarterly basis. In most product groups it is possible to compare conventional and organic data.

Wholesale price reporting on organic fruits and vegetables

Price reporting on fruit and vegetables, the “wholesale price analysis”, was established at the beginning of the 1990s. Today price reporting on fruit and vegetables is based on reports from 150 fruit and 190 vegetable registration assets indicating their prices. However, this figure relates to more producers than the number of registration assets would imply at first sight since many registration assets report prices for several farms. The price reporting involves organic farms and producer cooperatives as well as purchasing wholesalers. The organic farms forward their sales prices to the (purchasing) wholesalers on a weekly basis. The prices of the purchasing wholesalers (wholesale cost prices) are reported weekly and are also integrated in the DCPS. In order to allow an adequate assessment, prices for the producing farms are weighted on the basis of their cultivated area and for processors on the basis of their processed quantities. Wholesale cost prices are weighted according to the estimated sales of the particular wholesaler.

The product range covers the entire domestic assortment of fruit and vegetables. Therefore not only generic products like ‘lettuce’ are being registered, but also the type such as ‘iceberg’, ‘Batavia’, etc. Depending on the product, differentiation may also be in terms of the size of the package, but price reporting on conventional fruits and vegetables is consistently more specific. With approximately 1,500 hectares of a total organic vegetable growing area of approx. 8,200 hectares and approximately 1,350 hectares of the total organic fruit growing area of approx. 4,600 hectares, the DCPS on organic prices is generally representative for most products.

Organic product prices are published in a weekly market report (ÖKOMARKT-Forum) and via an on-line-service allowing access to the price database. The report only allows a limited comparison between conventional and organic product prices since on the conventional data are collected at a different market level (wholesale cost prices versus wholesale sale prices).

Special software was developed for collecting data on organic prices and this is being continuously refined. The software is based on an SQL database with interfaces to Microsoft Access and VBA programmes which provides for many types of analysis. The database will be improved and simplified over the next five to ten years. Data from other systems (e.g. conventional price reporting on wholesale prices) can be input automatically and results can be published in a standardised format directly to the internet. Alongside an extensive acquisition module, the software will also support a computer-aided plausibility check and, in addition to this, an expert check will be carried out by ZMP staff. Moreover, the data will also be compared with data from other sources.

One data exchange module is the “supermarket sales price comparison” for fruit and vegetables of conventional and organic origin, which was set up at the end of the 1990s. Wholesaler prices for the entire domestic supply of fruit and vegetables from organic farming are collected at the most important German fruit and vegetable markets, mainly from wholesalers also represented at the supermarkets, and the data are differentiated by product according to the region of origin, size and weight. Although sales of organic fruits and vegetables via supermarkets are not very significant, this type of data collection provides a direct price comparison between organic and conventional products. On the other hand, the wholesale price

comparison based on data provided by almost all the organic wholesalers is more representative for the wholesale trade.

Table 7 Assessment of data quality ZMP (price level)

Relevance	The DCPS meets most users' current price data needs satisfactorily; statistical concepts and methods are sufficient; the number of data providers should in some cases be improved; information on volumes is scarce and needs improvement which inevitably requires more human resources.
Accuracy	Data are provided from two sources – producers and buyers. Since producers tend to report higher prices and the purchasing/wholesale trade tend to lower prices, the effect is to improve the accuracy data.
Timeliness and punctuality	Weekly up-to-date prices; for the participating group of users updated daily, for readers with a delay of three days. Situation is fine.
Accessibility and clarity	Aggregated data are fully accessible; for the group of users even one day earlier.
Comparability	Data are comparable to conventional market data for potatoes, cereals, meat, milk and eggs. Because data are collected at a different market level, this does not always apply to vegetables and fruits. With regard to product definition, more and more product descriptions from the conventional sector are being adopted.
Coherence	Not specified

2.3.2 Prezzibio - Italy

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The Azienda Romana Mercati (ARM) is a special agency of the Chamber of Commerce of Rome established to develop and promote the agri-food sector. The objective of ARM is to promote and increase the value of the agri-food sector in the province of Rome and to provide specific development services. Furthermore, ARM undertakes initiatives, research and studies to develop the agricultural sector in general, supplies special services to farms, is involved in Rome's commodities and foodstuff exchange and collaborates with other public and private organisations in developing projects within the sector. The projects managed by Azienda Romana Mercati, including the Prezzibio initiative (www.prezzibio.it) which is the object of the Italian case study, are mainly financed by the Chamber of Commerce of Rome.

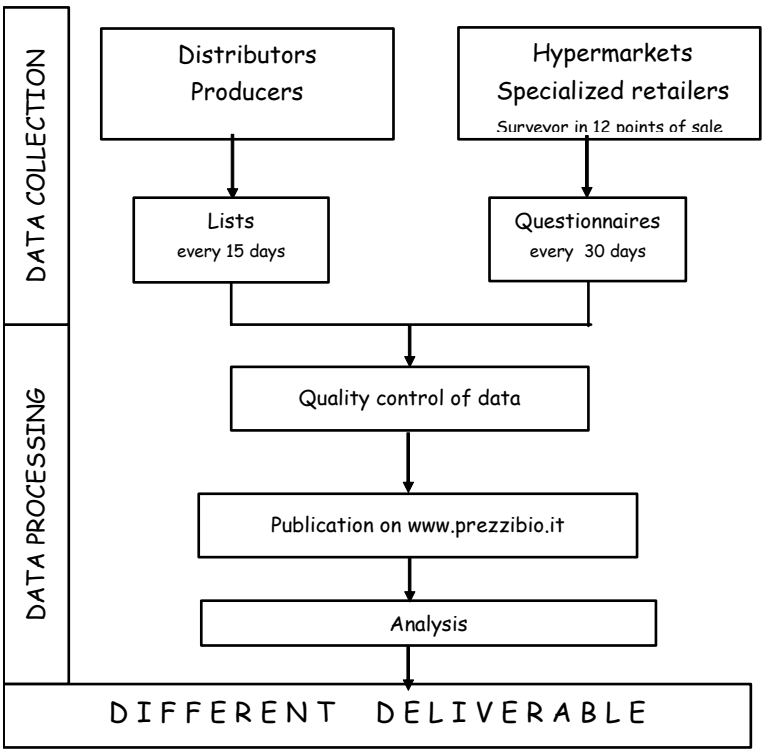
Prezzibio, an initiative to collect data on organic product prices, began in September 2001 as a joint initiative between ARM (Azienda Romana Mercati) and AIAB (Associazione Italiana per l'Agricoltura Biologica - Italian Association for Organic Farming). It aims to ensure price transparency in market transactions among traders and between traders and consumers. Without any specific statistical experience and expertise, ARM and AIAB have defined the framework of the initiative with the objective of managing economic information in agri-food chains in the Italian organic

sector. The Prezzibio initiative creates various price lists, including production and distribution level prices for the organic fruit and vegetable sector and consumer level prices for milk, cheese, eggs, cereals, pulses, flour, pasta, oils and other dressings, beverages and fruit juice, tea and coffee. Every price list contains at least the minimum, maximum and average prices for each product quoted as well as some general information on market trends.

Data collection at the production level is mainly done through the involvement of and consultation with the main organic operators throughout Italy (distributors, co-operatives, producers, specialised retailers, supermarkets). The aim of this massive stakeholder involvement is to ensure that the data are representative. Producers and traders send their price lists and quotations to the initiative, and a final (average) price list is published on the internet every fortnight. In order to ensure data quality, only prices which appear in at least three different price lists are published.

At the consumer level, price lists are produced using specific surveys run in twelve points of sale in the major Italian cities, each representative of its sector. The data collection questionnaires are the same for different points of sale and obtain the minimum, average and maximum prices for each type of product. Both specialised retail shops and supermarkets are included and each month the Prezzibio publishes two price reports, one for specialised retail sales and one for supermarkets.

Figure 3 PREZZIBIO: data collection structure



The lack of common protocols for data collection at the production and distribution levels creates problems in defining prices for product categories that are not included in all producer and distributor lists. Therefore, until now it is only possible to provide information on the most important product groups.

Data dissemination and publication is mainly via the initiative's open access internet site (www.prezzibio.it), where different market analyses provide information on:

- o price comparisons between organic and conventional products sold in supermarkets;
- o an index of market instability derived from the difference between minimum and maximum prices at various stages;
- o price increases along the food chain as an index of added value in the various commercial stages;
- o price trends over time for every product;
- o price comparisons between supermarkets and specialised retailers.

The following table provides an assessment of data quality based on case study results and expert evaluation:

Table 8 Assessment of data quality for Prezzibio (price level)

Relevance	Data collected in the DCPS are useful and appropriate for final user requirements. Moreover, Prezzibio represents a source for many scientific studies and analyses for project partners, universities and research institutes.
Accuracy	Data do not appear particularly accurate if we consider that representativeness of the production and consumer volumes is not included in the criteria for collecting data.
Timeliness and punctuality	Although the partners in this project are not statistical agencies, data are collected and published regularly every fifteen days for production and distribution lists and every month for consumer lists.
Accessibility and clarity	Prezzibio data are clear and easily accessible; they are available free of charge on the project web site.
Comparability	Data are easily comparable in terms of time using historic data, and in terms of space given that the surveys are carried out at the same points of sale and for the same products. Data are also comparable to those supplied by other international organisations since the reference points are generally the same (euro/kg, production, wholesale market and consumption).
Coherence	Problems of coherence exist with other official statistics sources, such as Commodities Exchanges.

2.4 Trade (including Import/Export)

2.4.1 DEFRA (P1)

DEFRA Statistics Division has requested and is receiving quarterly data on third country import authorisations from Port Health Authorities (covering both air and sea ports). Information is collected on importer, product, country of dispatch, quantity and unit, port of entry and cost of licence. This data has been collected over the last four quarters, with increasing numbers of ports reporting on a regular basis, but no central analysis of the data has yet taken place, in part to be sure that reporting is as comprehensive as possible. Due to staff limitations in DEFRA, there is a need for initial work combining returns to be conducted by Customs and Excise, and this has also led to some delays. Dissemination is planned via a statistical notice published on the website as for the production data. Concerns relating to commercial

confidentiality are addressed by disclosure rules which require a minimum of five cases (i.e. five different importers per product) before data can be published.

The following table provides an assessment of data quality based on the interviewee's opinions and expert evaluation.

Table 9 Assessment of data quality DEFRA (trade level)

Relevance	The relevance of the data is good for what is covered, i.e. imports from third countries, although the value of products imported from these countries is not covered and the restriction to third countries also affects the range of products that can be covered. The main limitation, however, is that data is not available for internal EU trade. This is discussed further in the SWOT analysis below.
Accuracy	The accuracy of the data provided is believed to be high – this is comprehensive administrative data subject to strict legal reporting requirements. But the process is still at an early stage of development, so there remains an uncertainty about validation issues and how good the data really is.
Timeliness and punctuality	Data is transferred shortly after the end of each quarter, so this aspect is good, but in practice no data has yet been analysed or reported so it is difficult to evaluate this aspect at present.
Accessibility and clarity	Good
Comparability	There is good comparability with other import data as the same procedures are used.
Coherence	The potential for coherence and consistency over time is high in the longer term provided that validation shows current procedures to be effective.

2.4.2 Statistics Denmark

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Statistics Denmark (DS) was established as a governmental institution in 1850 and its activities are founded on the *Act on Statistics Denmark,* adopted in 1966. This Act gives an independent Board of Governors the responsibility to determine the institution's work programme and it allows Statistics Denmark access to data from all public administrative registers in Denmark. In comparison with many other countries the production of statistics in Denmark is highly centralised, but there are other national suppliers of statistics as well as Statistics Denmark, such as municipal authorities and other government departments. However, Statistics Denmark is responsible for ensuring that the overall statistical picture is complete and coherent regardless of the source.

DS takes part in the joint European statistical programme within the framework of the European Union. It is also involved in other international activities, e.g. in cooperation with some Nordic countries, as well as with the UN and UN organisations. Moreover Statistics Denmark cooperates with other international organisations such as the OECD, IMF, and ILO etc. Statistics Denmark is organised in four departments: Social Statistics, Business Statistics, Economic Statistics and User Services. The Department of Statistics on Agriculture and Transport is part of Business Statistics. Statistics Denmark is financed by the government, but specific studies may be funded by other public institutions. The study 'Turnover of organic foods in retail shops' carried out in 2003/2004 was funded by the Directorate for Food, Fisheries and Agri Business under the Ministry of Food, Agriculture and Fisheries.

Statistics Denmark has collected information on organic agriculture since 2001. The data collected annually include information on:

- number of organic farms according to size and type of production;
- size of organic farming area according to type of plant production and regional distribution;
- number and types of animal units and livestock farms according to farm size and regional distribution;
- number of dairy farms and amount of milk delivered to dairies;
- number of organic eggs produced for direct consumption;
- operating income of in-conversion and organic farms.

For the collection of data on organic farming, processing, consumption and trade, Statistics Denmark's main collaborators are the following public and private institutions:

- Danish Veterinary and Food Administration (responsible for the inspection of organic processors, wholesalers and retailers) www.fvst.dk
- the Plant Directorate (responsible for the inspection of organic farms and farming input processors and trade companies (feed, seed, fertilizers, etc.) www.pdir.dk
- Danish Research Institute of Food Economics www.foi.dk
- Directorate for Food, Fisheries and Agro Business www.dffe.dk
- Danish Agricultural Advisory Service www.lr.dk
- on the international level, Statistics Denmark co-operates with Eurostat for statistics on organic production http://epp.eurostat.cec.eu.int.

In connection with the Danish survey 'Foreign Trade in Organic Products 2003', carried out by Mr Poul Henning Larsen in 2003, he has prepared a report which was partly financed by Eurostat under Theme 66: Agro-industrial statistics. The title of this study is 'Implementation of Statistics on Products with Distinctive Marks – Foreign trade statistics in organic products with special focus on methodological aspects'. The report is due to be published in June 2005.

In the reports from 2003, 'Organic Statistics, Needs Assessment and Possibilities for an enlarged Coverage of the Organic Sector, Phase 1 and 2' (in Danish) by Poul Henning Larsen, Statistics Denmark, foreign trade in organic products was one of two areas selected for a test survey (the other was the turnover of organic food products in retail shops). Statistics Denmark collects monthly statistical information on trade between Denmark and other countries using two data collection systems

covering trade with EU member states and trade with third party countries, but in these surveys there is no discrimination between organic and conventional products.

By combining the information from the two data sources on foreign trade referred to above with the information on farms, factories, processors, wholesalers and other enterprises registered by the two national organic certification and inspection bodies, the Plant Directorate and the Veterinary and Food Administration, it should be possible to develop a statistical model for foreign trade in organic products for Denmark.

The statistics for trade with other EU countries have been collected since 1993 and the system is based on monthly reporting of data from about 10,000 companies in Denmark with total annual imports of at least 1.5 (0.2) and/or exports of at least 2.5 (0.33) million DKK (€) each. For each transaction (import or export) the following statistical information is collected:

- product code from the Combined Nomenclature (CN)
- partner country (import = country of origin; export = country of destination)
- type of transaction
- invoice value in DKK
- net weight in kilos and/or other appropriate unit, e.g. litre, piece, etc.

The trade between Denmark and third countries is calculated on the basis of reports to the Danish Customs and Tax Administration. Every third party country trade transaction must be reported, so the statistics cover all trade with third party countries. The data are collected on a monthly basis. For minor transactions below 7,500 DKK ~ 1,000 € and 1,000 kg, there is a simplified form of reporting. For each import/export transaction, the following statistical information is collected:

- product code in accordance with the EU Combined Nomenclature (CN-8) or TARIC - only for import (Integrated tariff of the European Communities (TARIC), Official Journal C103/1 of 30.04.2003).
- partner country (import = country of origin; export = country of destination)
- code for procedure
- equivalent value in DKK
- net weight in kilos and perhaps a supplementary unit, e.g. litre, piece, etc.
- form of transport when crossing the frontier.

The Plant Directorate is the only certification and inspection body for organic farms, feed companies and other enterprises (fertilisers, seed etc.) dealing with inputs to organic farmers and output other than food products, while the Veterinary and Food Administration is the only certification and inspection body for food processors and enterprises packaging and marketing organic food products plus wholesalers and retailers (http://www.uk.foedevarestyrelsen.dk/Food/Organic_Foods/forside.htm).

The in-conversion and certified organic farms and farm input enterprises controlled by the Plant Directorate report annually on their activities and, for each product category, state whether the organic products are processed, stored, sold on the national market or imported and/or exported. The list of enterprises dealing with inputs (i.e. fertilizers, seed, feed etc) can be found on the internet at http://www.pdir.dk/Files/Filer/Oekologi/Virk/Aut_virk/Virksomheder.pdf. The list is updated whenever there are changes reported. Processors, wholesalers and retailers are registered according to their VAT number and branch of trade (NACE code) in the

Veterinary and Food Administration, and they are controlled by the eleven regional Veterinary and Food Administration offices. The Veterinary and Food Administration keeps a register of the certified enterprises, but amounts or value of the products produced or processed are not recorded. The list of enterprises dealing with certified organic products, updated on a weekly basis, can be found on the internet at http://www.foedevarestyrelsen.dk/sdata/Oekologikontrollerede.pdf.

Enterprises must be approved before they can trade in organic products. Imports from EU member states plus the EFTA countries, Iceland, Norway, Switzerland and Lichtenstein are recorded separately from imports from third countries. For imports from EU and EFTA countries, documentary evidence is needed to show that the vendor is controlled by a certified inspection body in their home country together with an original invoice from the vendor proving the organic status of the goods. The import does not need to be reported to the Plant Directorate, but import of organic food products from the EFTA countries must be reported to the Veterinary and Food Administration. Imports of organic products from third countries must be reported to the Plant Directorate before they reach Denmark. Since 2002 the Plant Directorate has kept copies of the export certificates which contain information on product type and amount. The Food and Veterinary Administration does not collect information on amounts imported from third countries, but registers only the approvals given for import of organic food products directly into Denmark. Danish enterprises authorised for organic production and/or sale may export their products without reporting anything.

By the end of 2003 about 3400 farms/enterprises (legal units) were registered in the Plant Directorate and almost 500 enterprises (legal units) in the Veterinary and Food Administration. Matching this information with the information in the foreign trade register of Danish Statistics, it turned out that 226 of the enterprises could have been involved in foreign trade in organic products and the population for the survey was therefore reduced from 3900 to 226 enterprises. The 226 enterprises received a questionnaire with the information they had reported to the foreign trade statistics registers and were asked to report the proportion of the turnover in DKK and kg relating to the import/export of organic products and which countries were involved in the transactions. Of the 226 enterprises, 121 had been involved in foreign trade. The period covered by the survey was 2003 and it has not been repeated since then.

The value in DKK of imported/exported organic products classified according to 14 commodity groups has been published together with information on import and export to and from the EU-15, the most important EU countries in foreign trade with Denmark, the rest of Europe, Africa, North and South America, Asia and Oceania. The data were published in the 'Survey on Foreign Trade in Organic Products 2003' by Poul Henning Larsen, Statistics Denmark, (in Danish) in Statistiske Efterretninger 2004:25 of 29 November 2004.

Table 10 Assessment of data quality Statistics Denmark (trade level)

Relevance	The DCPS is very relevant for market and policy stakeholders, organic certifiers, companies involved in foreign trade in organic products, ministries administrating trade in agricultural products, market researchers and news media as well as for the European Commission and Eurostat, the UN and OECD. Statistics on foreign trade in organic products had not been produced before in Denmark.
Accuracy	Foreign trade with the other EU-15 member states is probably underestimated because the statistical data collection only includes enterprises in Denmark with total

	annual imports of at least 1.5 million DKK (0.2 million €) and/or exports of at least 2.5 million DKK (0.33 million €). These limits have been set by Denmark in accordance with the EU regulation 1901/2000 dealing with intra-trade statistics. Estimates of the volume of intra-trade below this threshold and non-reported trade are based on fiscal information. In the survey of foreign trade in organic products the figures have been supplemented with information based on estimates from the VAT return, which covers all transactions in goods between Denmark and the EU member states. The accuracy of the data on foreign trade with third countries is very high because all transactions above 1000 € or 1000 kg are included. The statistics on third countries are regulated by EU regulation 1917/2000 on extra-trade statistics. However, the accuracy of the survey on foreign trade in organic products 2003 was subject to considerable uncertainty, as 15–20% of the data was either missing or so unreliable that the figures could not be included in the survey. To make up for this, supplementary estimates were made based on VAT figures. Therefore the final total figures are considered very reliable, but the detailed figures are not reliable. It is estimated that the uncertainty with respect to the detailed figures distributed by commodity country is of the order of c. 10% on average, corresponding to the supplement made to the reports from the VAT figures.
Timeliness and punctuality	According to EU regulation 1917/2000, the extra-European monthly trade statistics should be transmitted to the Commission (Eurostat) no later than six weeks after the end of the reference period. For intra-European trade statistics, EU regulation 1901/2000 requires the monthly statistics to be submitted to the Commission (Eurostat) no later than eight weeks after the end of the reference period for overall results and no longer than 10 weeks for detailed results. It is not necessary to publish data on foreign trade in organic products on a monthly basis - annual data collection is more realistic. Preliminary annual foreign trade statistics are available in May in the following year but since processing and quality checking of the data reported by the enterprises involved in the export/import of organic products takes considerable time, Statistics Denmark cannot publish the results until October or November of the following year.
Accessibility and clarity	The statistics on foreign trade are published in the monthly publication “Nyt fra Danmarks Statistik” (News from Statistics Denmark), in the monthly series, “Statistiske Efterretninger” (Statistical News), in the quarterly series “Statistikservice” (Statistics Service) and in the monthly “Konjunkturstatistik” (Main Indicators). These publications are available to the public, but they are not free of charge. Statistics on foreign trade are also available in English from StatBank Denmark www.statbank.dk free of charge. The 12-page ‘Survey on Foreign Trade in Organic Products 2003’ was published (in Danish) in Statistiske Efterretninger 2004:25 of 29 November 2004, and it can be bought from Danish Statistics for 37 DKK ~ 5 €.
Comparability	Comparability over time: any gaps in the time series as a result of changes in collection methods etc. are adjusted for by estimates to ensure that the foreign trade figures are comparable over time. Data comparability does not apply at the most detailed commodity level because the content of many product codes has changed over time. Comparability with other statistics: the foreign trade figures are comparable with several other sources: • The partner country’s recording of the same transaction (the mirror transaction). The comparison is hampered by differences in definitions and in the level of value for the recording of imports and exports. Payments in connection with foreign trade in products. Different basis of accrual and differences in valuation hamper comparison • Reports on EU purchases and sales of products on the VAT return. These statistics are not published but are used in the continuous control of the reports to Intrastat.

	The nomenclature used in the survey on foreign trade with organic products 2003 is the combined EU Nomenclature (CN-8). To improve the comparison of international statistical surveys the information has been published according to the UN International Trade Classification (SITC)
Coherence	Apart from the foreign trade statistics information on external trade can be found in: • the national accounts • the business statistics • the balance of payments which must relate to one another. The share of estimated figures is in the order of 15–20 %, when the statistics are first published. There are some differences between the first and the final publication of foreign trade figures for any given month because the inaccurate data are checked and adjusted against information from VAT returns and other sources in the final publication.

For further information on the quality of foreign trade statistics in the EU and Denmark, can be found at:

- Foreign Trade Statistics – Quality Report: Foreign trade, European Commission Working Papers and Studies, Theme 6. 2003 edition) http://epp.eurostat.cec.eu.int/cache/ITY_OFFPUB/KS-AS-03-001/EN/KS-AS-03-001-EN.PDF
- Danish external trade statistics 2003 http://www.dst.dk/asp2xml/external/external.asp?title=Danish%20External%20Trade%20Statistics%202003&hreflang=da&path=/Vejviser/Portal/Udenrigshandel/METODE/omudenrigshandelsstatistik.aspx&ancestor=Statistik&file=/upload/danish_external_trade_statistics_2003.pdf
- The quality of foreign trade figures, prepared by Danish Statistics' External Trade Division, July 1, 2001 http://www.dst.dk/asp2xml/external/external.asp?title=QualityReport&hreflang=da&path=/Vejviser/Portal/Udenrigshandel/METODE/kvalitetsrapporter.aspx&ancestor=Statistik&file=/upload/qualityreport.pdf

2.5 Retailer/Consumer level

2.5.1 Statistics Denmark

Since 1939 Statistics Denmark has collected data and calculated an index for the turnover in retail shops, and by now this is available for 49 product categories. The surveys cover all retailers with an annual turnover of more than 10 million DKK including VAT plus a stratified sample of retailers with an annual turnover of between 2.5 and 10 million DKK including VAT. Statistics Denmark estimates that reporting from the retailers in the 'Foods and other daily commodities' group accounts for 85% of the total turnover in this group. The survey is carried out six times a year but organic and conventional products are not recorded separately.

According to the OMIaRD report 'Analysis of the European Market for Organic Food' (2002) about 86% of the turnover of organic food products in Denmark takes place in three super market chains, grouped into seven subsidiary chains, plus some chains of general stores and independent general stores organised in the Federation of General Stores (FGS) www.d-s-k.dk . FGS has about 1500 member stores and are supplied by three wholesalers. This means that it should be possible to collect information on volume, composition and price of the turnover of organic foods in retail shops by means of a stratified sample collection from a few aggregated data sources

(the three supermarket chains and the three wholesalers). However, such data were not been collected until Poul Henning Larsen of Statistics Denmark conducted a test survey in 2003- 2004.

One important condition for the survey is the Danish Act on Statistics, Article 8, which says that all Danish enterprises must deliver information of statistical importance if requested to do so by Statistics Denmark. Accordingly the seven subsidiary chains of the major supermarkets were requested to deliver information on the total turnover in kg (net weight) and DKK (including VAT) of organic products according to a questionnaire classifying the organic foods into 13 different product categories using COICOP (classification of individual consumption by purpose). The three wholesalers were asked to deliver the same information on their sales to retailers excluding sales to the three supermarket chains mentioned above. In order to estimate the turnover in the FGS general stores, wholesale prices have been recalculated into retail prices using the price per kilo of the various food product groups, estimated on the basis of the total turnover in kg and DKK for this product group in the supermarket chains. This price was then multiplied by the total turnover in kilos reported by each wholesaler. Finally the total turnover of each wholesaler in DKK was compared with the actual turnover in order to check the applicability of the method for all product groups. When in doubt, the wholesaler was contacted by phone.

The period covered by the first questionnaire was 2003. In 2004 the survey was repeated, but this time only two wholesalers were included because two of the original three had merged.

The survey of turnover of organic foods in retail shops in 2003 by Poul Henning Larsen, Danish Statistics, was published (in Danish) in Statistiske Efterretninger 2004:19 of 14 September 2004. The data for 2004 will be published in the first half of 2005 on www.statbank.dk, which can be accessed free of charge. The report for 2004 will be published in Statistiske Efterretninger in May 2005.

Table 11 Assessment of data quality Statistics Denmark (retail/consumer level)

Relevance	The DCPS is relevant for various market and policy stakeholders in the organic sector as such information has not been available to the public before. GfK has investigated the turnover of organic food products in Denmark before by means of a consumer survey of 2000 households. However such surveys do not give a full picture of the sale of organic food products, and they are not available to the public. AC-Nielsen has collected coded scanned-in data (barcodes) from various supermarket chains, which makes it possible to discriminate between organic and conventional products. These surveys should give a reliable estimate of the turnover of organic products in retail shops, but since 2003 several of the big supermarket chains have declined to participate in these surveys.
Accuracy	There is a minor inaccuracy due to the conversion of wholesale sales into retail sales. However, no measure of the accuracy has been calculated. The survey is estimated to cover about 80% of the retail trade. It is also estimated that the retailers buy about 50% of the organic fruit and vegetables from the wholesalers, and therefore the amounts registered by the wholesalers have been doubled in the survey. In addition, some general stores which are members of the Federation of General Stores get their milk products directly from dairies instead of through the wholesalers; therefore the sale of dairy products may be underestimated. To calculate the total retail turnover, direct sales of organic food products from farm shops, box subscription schemes and specialist shops should also be included in the survey, but this would increase the response burden considerably.
Timeliness and	The survey is published six months after the end of the reporting period. The next

punctuality	publication (for 2004) will be published in May 2005. It is not yet known whether such surveys will be carried out regularly in the future.
Accessibility and clarity	The 12-page report on the survey of turnover of organic foods in retail shops in 2003 has been published (in Danish) in Statistiske Efterretninger 2004:19 of 14 September 2004, which can be bought from Danish Statistics for 37 DKK ~ 5 €. A 2-page press release was published (in Danish) in "Nyt fra Danmarks Statistik" No. 391, Subject group: Agriculture, 14 September 2004 and this can be downloaded free of charge from http://www.dst.dk/TilSalg/Boghandel/Publikation.aspx?cid=8247
Comparability	The data are comparable with household budget surveys because the nomenclature used in the survey (COICOP) is almost identical with the nomenclature used by Danish Statistics in the household budget surveys.
Coherence	The coherence is good because the classification is similar to the household budget surveys.

2.5.2 Project 'Quantification of the demand for organic products in Germany'

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The objective of the project 'Quantification of the demand for organic products in Germany including the results from research project 02OE367' is to illustrate the development of the demand for organic products. The project is part of the government's support programme for organic farming, which is designed to improve the conditions for organic farming in particular by supporting projects which focus on market development, sales promotion and marketing.

Within the project a reporting system on consumer behaviour with regard to organic products is to be established, including the most important products and types of shops. Since AC Nielsen, GfK and bioVista will be partners in this project, panel data from retail panels as well as consumer panels will be integrated. ZMP will be in charge of the coordination and will bring the data from different sources together. According to the findings of the special panel on organic food (BÖL-Project 02OE367) this combined approach should cover about two thirds of the demand for organic products. The project is supported financially by CMA and will end in December 2006.

Table 12 Project structure 'Quantification of the demand for organic products in Germany'

	Cooperation project: continuous reporting on organic product demand			
Institution	ZMP	ACNielsen	GfK Panelservice	bioVista
Responsible:	Dr. Paul Michels	Wolf Hemmelmann	Helmut Hübsch	Christoph Spahn
Type	Semi-governmental	Private	Private	Private
Experience / expertise in organic markets	First projects in 1990	Various projects with ZMP	Various projects with ZMP	Several years of consulting experience
Funding				
- of the institution in general	Compulsory fees from farmers / own revenues	Information is sold	Information is sold	Information is sold
- of the project	ZMP/CMA, German government/ Federal Agency for Agriculture and Food			
Method of data collection	Analysis and adjustment of data generated by three co-operation partners; ZMP - raw data analysis	Representative retail panel on scanner basis / field service visits for product classification in 80 retail shops / random sample	Analysis of representative consumer panel data (13,000 consumers equipped with home scanners)	Retail panel on scanner basis; presently no calculation of the total market is possible
Product ranges covered	Vegetables / fruit / bread / eggs / potatoes / meat / sausage / poultry / cheese / milk / butter / yoghurt / curd cheese	Milk / butter / yoghurt / curd cheese / a selection of categories of packaged goods	Vegetables / fruit / bread / eggs / potatoes / meat / sausage / poultry / cheese	Milk / butter / yoghurt / curd cheese / a selection of categories of packaged goods
Data coding		EAN-based for packaged goods: EAN codes – have to be identified by field services (in 80 test shops)	EAN-based codebook for "loose" goods; important to examine classification of organic products; one option: price level as indicator. EAN coding for packaged goods, classification based on data provided by retailers, price lists and I-net research	Product identification based on the product data base owned by Ökoinform, one of the associates of bioVista
Type of outlets		750 multiple retailers and drug discounters	All type of outlets	75 organic retail shops
Period of data collection	2004-2006	Weekly analysis of scanning data organic coding: ongoing for new products	Weekly data gathering	Monthly

Project partners

ZMP
ZMP is a semi-governmental company financed by compulsory fees from farmers collected through the 'Absatzfonds' (German Agricultural Marketing Fund). The objectives of the company are the permanent collection and distribution of information on agricultural, food, forestry and timber markets in order to enhance market transparency. Using modern editorial and communication techniques, ZMP has to provide a neutral and up-to-date information service to all target groups in the agricultural marketing chains. ZMP monitors the market and prices of arable crops and livestock production.

ZMP also has a special department for organic products. Organic price reporting started in 1991 and now covers most of the important product groups and most sales levels: fruit and vegetables, animals/meat, milk and eggs (direct sales only), cereals and potatoes. Date on production quantities are also collected for these product groups. For further information, see Chapter 2.3.1.

ACNielsen
ACNielsen is a market research company which operates worldwide. In Germany, ACNielsen uses MarketTrack to collect retail scanning data from a sample of about 750 outlets and offers producers and retailers a detailed insight into product sales. Information is collected from retail channels such as supermarkets, hypermarkets and discounters. Normally ACNielsen retail panel reports only cover packaged goods at multiple retailers and drug discounters, with beverage shops included where necessary. ACNielsen therefore offers product information (e.g. volumes, sales, prices and distribution level) for various types and sizes of supermarkets.

ACNielsen has no database with EANs of all organic products. In order to generate organic product information, ACNielsen analyses trade texts and manufacturers' price lists. ACNielsen's field service also examines all products in a particular category in a sample of shops and divides them into organic or non organic. When organic product identification is included in MarketTrack, the information is also available in 'Homescan', the ACNielsen consumer panel. Shop audits took place in May 2004 for milk, yoghurt, butter and curds. In 2005, AC Nielsen intends to cover about ten further product categories in cooperation with ZMP and CMA.

GfK Panel service
GfK is a market research company which operates worldwide and, amongst other activities, conducts a consumer panel of 13,000 households in Germany. These households continuously register data about their product purchase behaviour for fast moving consumer goods using in-home scanners. In order to register products without EAN (like fresh vegetables), GfK provides their households with a detailed code book for many fresh products. GfK coding for fresh food is much more detailed than ACNielsen's Homescan. After scanning a fresh food item using the code book, the panellists are taken to a scanner dialogue in order to record further product characteristics like country of origin, package type and organic/non organic classification. The purchases data are collected by GfK via modem once a week. Therefore for many product groups GfK is able to deliver information on volumes, sales, prices and penetration, purchase frequencies, consumer product loyalty as well as on specific demographics. As GfK has no database with EAN codes for all organic products, they analyse trade texts and manufacturers' price lists in order to

generate organic product information for EAN coded products. For fresh food without EAN, the scanner dialogue asks the panellist to classify between organic and other food products.

bioVista

bioVista is a private company which specialises in consultancy for the organic sector. Since 2003 it has operated a specific DCPS for organic retail shops (Naturkostwarenhandel) gathering organic data on retail sales, retail volumes by product group and market type, consumption frequencies, market shares of single product groups, as well as on national consumer prices. Although the number of retail shops participating is still low, the data provided by bioVista are significant (e.g. in comparison to data provided by the German organisation of organic wholesalers and manufacturers (BNN)). Data are related to brands and are collected for bread and cereals, fruit, vegetables, beef, meat including veal, sheep and goat, pork, poultry, fish and fishery products, milk, milk products, cheese, eggs, edible fat and oil, sugar, jam, honey, chocolate and sweets, sauces, salt, herbs, soups, coffee, tea, cocoa, water, lemonade, juice, baby foods, alcoholic beverages, wine and beer. A breakdown of data by ACNielsen regions is planned to be available in 2006.

Table 13 Product groups covered by the project 'quantification of the demand for organic products in Germany'

vegetables (fresh)	bread	meat	milk	spreads, sweet (excluding honey)
fruit (fresh)	eggs	sausage	cheese	honey
vegetable juices	potatoes	poultry	yoghurt	
fruit juices	cereals, muesli (excluding oat flakes)	frozen ready-to-serve meals	curd cheese	biscuits
frozen vegetables	spreads, spicy		butter	other sweet pastries
frozen fruit	pasta (non refrigerated)			baby foods
canned vegetables	flour and cake mixes			

For economic reasons, only fresh and dairy products will be included in the first year.

GfK consumer panel

The product groups bread, meat, poultry, vegetables, fruit, potatoes, eggs, cheese and sausage will be presented in the project "Continued reporting on organic products" via the GfK household panel, covering all types of shops (food retail supermarkets, trade shops, organic food shops, organic supermarkets, health food shops, producers). The distribution of shops will be validated and adjusted by means of a special panel (BÖL-Project 02OE367). Because of the large demand for these products, the figures obtained from the household panel will be sufficient to illustrate development. After the first session, purchases of organic products will have to be examined intensively by GfK: loose products recorded via codebooks (diaries) must be correctly coded so that the purchases erroneously reported as organic products will be processed as conventional. In such cases, the price of the particular product will be used as an important indicator. Information on EAN-coded organic products

will be obtained by GfK from trading companies working with them. The extensive list of EAN coded organic products will require preliminary studies for the categories of bread, vegetables, fruit, potatoes, cheese and sausages. For these categories, GfK will add the identification for organic products to the crude data from the household panel. ZMP will validate the data by means of the special survey (BÖL-Project 02OE367) as well as from other sources.

ACNielsen retail panel for food retailing trade

Some of the product groups mentioned above will also be studied by ACNielsen via a trade panel in the food retail trade, and the identification of packaged organic products in the food retail trade will be a significant success factor in this project. As the EAN code does not allow differentiation between organic and conventional products, organic products will have to be identified by product group. For this purpose the ACNielsen field service, in addition to price lists and trade information, investigates approximately 80 randomly selected shops once a year and classifies all products in the studied product groups into organic or conventional. A report on the investigation is available quarterly, including information on quantities and prices as well as on market segmentation of the respective product groups.

bioVista retail panel for specialised organic food stores

The final piece of the puzzle is the bioVista retail panel, which corresponds in method to the ACNielsen approach. Using Ökoinform product database of, an associate of bioVista, the identification of the EAN coded organic products will be fairly simple. However, only shops using scanners will be included so it will not be possible to cover the whole market.

The main task of ZMP will be to organise the process of combining the data and developing methods for the identification of organic products by price. As customers of organic food shops are not sufficiently represented in the GfK panel, ZMP will also be responsible for improving its representativeness. The results will be published at www.oekolandbau.de and provided for further analysis.

Looking in to the future, the greatest challenge will be the continued financing of the DCPS which is being developed. In cooperation with CMA, GfK, ACNielsen and bioVista, ZMP will determine the prerequisites and partners which will allow the (financial) continuation of the project. As things stand at present, ZMP and CMA will continue to study the fresh products listed in Table 13 together with a few other coded product groups. Results will be provided to the market participants by means of publications and presentations. As soon as the identification of organic products has been achieved, the aim is to enable producers and/or traders to have brand and product specific analyses carried out at their own expense through market research institutions without having to pay set-up costs. Furthermore, the data from this project will subsequently be provided to universities for research projects.

Table 14 Assessment of data quality ZMP (retail/consumer level)

Relevance	The project will be a great improvement on the existing situation.
Accuracy	The current data situation on the demand level is poor and the project will improve this significantly. Data accuracy depends essentially on the correct identification of organic data; this is especially true for the GfK diary approach. Mistakes may occur when the reporting households try to classify organic and conventional products. In the ACNielsen retail panel some important retail chains are missing (e.g. Aldi). They are estimated via ACNielsen Homescan, which does not

	represent as many purchasing acts as the AC Nielsen retail panel. The bioVista database is still rather weak, but is growing steadily. ZMP will improve data quality significantly using different data sources. Once the data quality improves, producers and retailers can benchmark for their own business category by category against the total market or certain adjustments to the total market (shop types, regions). In addition, it will be possible to order specific brand information. For the administration it will be possible to have good estimates for product specific developments in demand and thus, it will be possible to consult farms with respect to successful future production opportunities.
Timeliness and punctuality	Some data are available two to four weeks after the end of the data collection period; other data are only provided twice a year.
Accessibility and clarity	Aggregated analytical data will be available online. Other data will be disseminated via ZMP presentations and publications. Universities will have access to the data.
Comparability	No comparable system exists worldwide.
Coherence	So far there is not enough experience to make an assessment.

2.5.3 IHA-GfK Group – Consumer and Retailer Panel

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IHA-GfK AG, a subsidiary of the international GfK (Growth from Knowledge) Group, is one of leading companies in the field of market research in Switzerland. The GfK Group a leading market research company worldwide, established over 70 years ago as Germany's first market research institute, with more than 120 subsidiaries, offices and representation in 57 countries. The company provides detailed market analysis to clients from industry, retail chains, and the service and media sectors to facilitate their strategic decisions. The business activity of the IHA-GfK AG is mainly divided into three areas:

- market research,
- managing and developing software systems for DCPS,
- consulting.

In the present study the company collects information using a retailer and a consumer panel which include organic retail/consumption data. On the basis of the two DCPS and using a specific method, IHA-GfK is able to calculate the volume and value of organic consumption in Switzerland as well as the organic share in volume and value.

The consumer panel is comprised of 2550 private households which, for statistical relevance, are divided into socio-demographic groups (single-, couple-, family-households, age groups, income groups, spatial groups). The retail panel data collection uses scanner-based sales figures. For companies like COOP and Migros which are not yet able to provide scanner data, delivery data are also used.

IHA-GfK is able to combine data from the retailer and the consumer panel to calculate the total organic consumption for Switzerland. This method was developed, adapted and checked for plausibility over the last two years and can now present fairly accurate figures for organic consumption and for distribution channels which are not able to use scanner data.

IHA-GfK Panels

The consumer panel is made up of 2550 households selected to be representative of the socio-demographic composition of the Swiss. The grouping of the households is based on criteria such as age groups, household and family structure, and income. Using data from the consumer panel, consumer behaviour and consumption for conventional and organic products within the different socio-demographic groups can be analysed.

The panel provides data on penetration rates, consumption values and volumes, and annual development rates. A direct comparison between organic and total consumption is possible.

One problem for all data published before 2004 concerns the representativeness of private households in the panel, because until then panel recruitment was based on the Swiss population statistics from 1990 which underestimated the current size of the cities. Population statistics from 2000 address this problem but it has led in the past to biased recruitment of panel participants. A further problem arose from the 'panel effect', which means that panel participants tend to adapt their buying behaviour as their knowledge of the buying behaviour of their own and reference groups increases. Households generally remain in the panel for about ten years. Finally, it is difficult to be representative of all household types. Young consumer households (under 24 years of age) and large families tend not to take part in the consumer panel. Incomplete data sets also result from the fact that is usually women who are responsible for the buying activities of a family and who report in the household diary. However, their male partners may buy products spontaneously which are often not reported in the household diary.

The retailer panel data are obtained from the six most important Swiss retailers: Migros, Coop, Denner, Carrefour, Spar, and Volg. Data collection is by means of scanner-based sales data or purchase data/sales totals. A problem arises because the different data sources are not directly comparable, which means that sales figures are mainly based on expert estimates. However, since 2004 data from COOP and Migros have also been based on scanner and therefore the accuracy of the sales data will increase.

Data processing for both panels is structured in essentially the same way. The data on organic consumption are divided into 13 product groups (milk, butter, yoghurt/curdled milk, curd, hard cheese, soft cheese, cream cheese, eggs, bread, vegetables, fruits, meat, poultry). Each group is separated into organic, conventional

and total consumption by volume and value. Separate results can also be provided for the French- and German-speaking regions of Switzerland.

Table 15 Data quality IHA-GFK Switzerland (retail/consumer level)

Relevance	The DCPS is satisfactory for current user needs; statistical concepts and methods are still in development. The methods used by IHA-GfK are tailored to the needs of the most important retailer customers in Switzerland. For public users, it can be difficult to analyse the actual organic consumption on this basis.
Accuracy	The methodology of panel recruitment generally ensures representativeness. However, using the Swiss population census of 1990 as the basis for recruitment led to a certain bias in rural and urban population in the consumer panel. Also it is difficult to recruit certain private household types, especially young households and large families.
Timeliness and punctuality	Data quality is excellent. The results are provided to users on a monthly basis with a time lag of 30 days.
Accessibility and clarity	Data is accessible to authorised persons and institutions and must be paid for.
Coherence	Coherence is generally good but there are small differences in the data from one year to the next because of alterations in panel recruitment.

2.6 Supply chain level

2.6.1 Fab4minds – BioStockManager® (BSM)

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fab4minds Information Technology GmbH is a private consulting and IT company which specialises in developing software systems in the area of traceability and quality assurance for agricultural products. Since its foundation in 2000, fab4minds has developed different traceability and quality assurance systems such as BioStockManger®, FoodRessourceManager® and AgrarCertificationManager®. The idea behind the different systems is to provide very flexible and easily manageable software tools for market partners along the whole supply chain with the aim of achieving traceable analysis of the flow of goods and their quality. Although the company has no specific expertise in the collection of statistical data itself (only in the development of software tools for easier data collection), the development of traceability systems leads automatically to examining the uses of the collected data for statistical purposes. In this respect the company has developed strong relationships with producers, certification bodies (as the main suppliers of data), administrative offices (Agrarmarkt Austria, Austrian agency for organic grain), depositories, manufacturers and, last but not least, retailers. The data collected at

present are used for internal (company) documentation and TQM rather than for (publicly available) statistical purposes.

BioStockManger® is a fully web-based traceability system used for the organic grain market in Austria. The system is designed to combine two different data collection approaches, namely traceability data on the one hand and data on quality assurance on the other. The idea behind this is to provide a more detailed picture of the flow of goods along the whole supply chain. The system, which has been in use since the year 2000, is fed with information from various market partners along the supply chain, from farm to fork, by using customised software tools for data input and analysis. Using this system more than 130,000 tonnes of organic grain have been traded by more than 2500 producers and 100 partners (in Austria, Germany, Italy and Switzerland). Since for statistical purposes quality assurance control data (consistent certification process, integration of laboratory results, etc.) are not of primary importance, the main statistical focus is the traceability of the flow of goods from the producer to the consumer.

Figure 4 Data flow with the Biostockmanager®

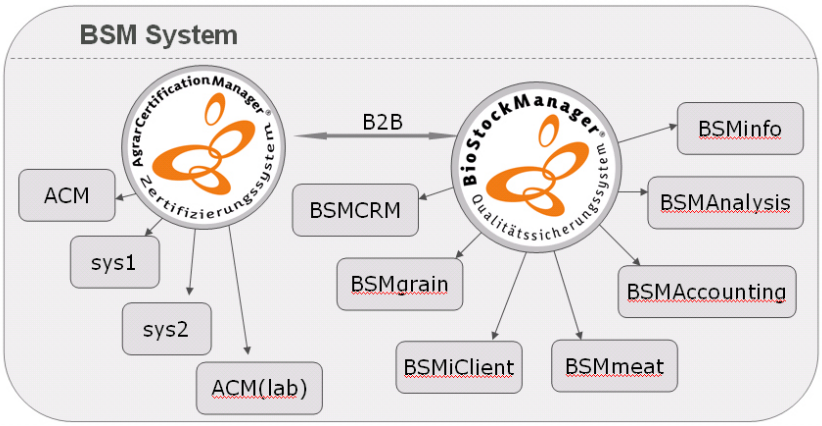
As for the organic grain market in Austria, it was necessary first of all to develop a central certification database in order to enable different certification bodies to transfer certification data into and out of the system. At the moment, Agrar-CertificationManager® (ACM) offers an open web-service based interface for the major certification bodies which enables them to provide their data for the BSM as well as for other authorised institutions. For those inspection bodies unable to provide an IT interface to AgrarCertificationManager® (ACM), a low cost B2C solution is available which enables transmission of the necessary data over the internet. The information fed into the BSM allows automatic calculation of the maximum amount of corn which the farmer can sell which can preclude some possible fraud. At harvest time the corn is taken to the depository warehouse and the amount delivered is input

directly to the BSM system through interfaces with the weighing platforms. Each single delivery is recorded by farm, product group and amount/weight and is allocated to the correct farmer by a special charge number code and an EAN barcode. After quality analysis in the laboratory, the appropriate charge number is released for transport and processing. Stock removal at the warehouse and delivery to the processors is also documented via EAN barcodes and automatically communicated to the BSM system. The same procedure is used at every step in the supply chain to the point where the final product reaches the consumer. At the end of the process the consumer (as well as authorised administrative offices or certification bodies) are able to have a detailed overview of the product along the supply chain. Consumers of "jaNatürlich" products (www.janatuerlich.at) are able to trace back the origin of the products from 'farm to fork' using the EAN code on the first real 'traceability' web portal.

The fundamentally new approach to data collection in this system is that data are available immediately they are input i.e. in real time. Data collection is also combined and/or integrated almost automatically into the recording and functions which are already required, which reduces the additional administrative workload for data collection and reporting activities enormously.

For data analysis this means that collection, processing and publication of data on the production and processing level can be done at the same time. A special website is available (www.biostockmanager.at) where it is possible to view the different corn stocks of various warehouses and processors.

Figure 5 How BioStockManager® (BSM) works



The DCPS generally provides very detailed and structured data on farm, processor and import/export level, and some wholesaler and retailer level data. The method of data collection involves creating a permanent full census in real time via online registration of certification data, delivered quantities and warehouse stocks as well as imports and exports. Although the system at this time is only in use for the Austrian grain market, in theory it could extended to other product groups.

The data quality of the DCPS (as defined by Eurostat 2003) was assessed as follows by the interviewees and expert opinion.

Table 16 Data quality assessment Biostockmanager® (supply chain level)

Relevance	The DCPS is satisfactory for current user needs; statistical concepts and methods are sufficient.
Accuracy	Due to the full census methodology, data accuracy is excellent.
Timeliness and punctuality	Due to 'real time' collection and processing, timeliness is excellent.
Accessibility and clarity	Data can be accessed only by authorised persons and institutions. The clarity is sufficient.
Comparability	The DCPS has to improve its comparability to official statistics e.g. the nomenclature used.
Coherence	So far there is too little experience for an adequate assessment.

2.6.2 INTACT- e-cert

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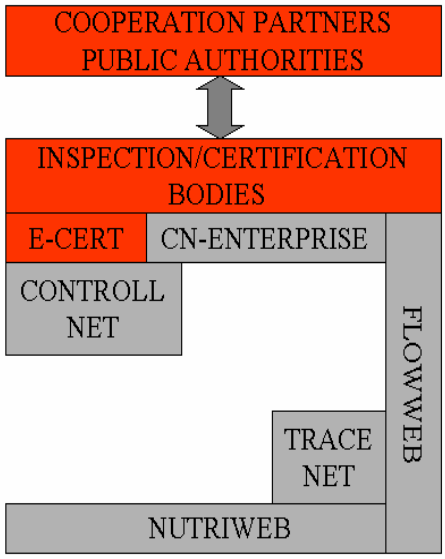
e-cert IT GMBH consists of three international certification bodies (Austria Bio Garantie, bio.inspecta (Switzerland) and Naturland e.V. (Germany)) and a private consulting and information technology company (Intact Consult (Austria)), which specialise in developing software systems in the area of traceability and quality assurance for agricultural products. The consortium aims to provide useful software tools which reduce the administrative workload for the respective certification bodies and also improve traceability and security of the certification process. The software tools developed can be applied not only to organic production but also to the certification of conventional standards like, for example, EUREPGAP. The idea behind the e-cert tool is to provide a means for inspection bodies (in the best case) to conduct the whole inspection and certification process in paperless electronic manner.

Although the main aim of e-cert IT GMBH is not primarily data collection for statistical purposes, the tool provides good potential for improvement in the data collection process as well as for data quality, especially at farm level and to some extent also at processor level. At the moment the data gathered are not used for any (public) statistical purposes, although they are already sent to the respective 'supervising' authorities. Besides various contacts with inspection and certification bodies, in Austria e-cert also cooperates closely with AgrarMarkt Austria (AMA), which is mainly responsible for administering agricultural grants. In professional consultancy, e-cert works closely with FiBL in Switzerland.

Figure 6 Structure of E-Cert



The main function of the system is to facilitate the inspection and certification process by using electronic data collection, processing and storage as well as to improve the traceability of the certification process for actors along the supply chain and for public authorities. The main advantage of the system is its multilingualism (the system can be used in German, English, Spanish, Italian, Hungarian and French simultaneously) and its flexibility with regard to different inspection and certification standards (EU-VO 2092, organic farmers' associations). Additionally the system fulfils the requirements of EN 45011 as well as ISO 65 for accredited institutions.

In principal the DCPS is based on a number of different modules:

E-cert Basic

- *Administration of master data*

The master data management module handles comprehensive data on farmers, processors, employees, inspectors and certifiers, as well as relevant organisations. Areas and numbers of animals are also integrated. The documentation is managed within several worksheets which relate to the particular classification e.g. person, inspection, field number, animal, organisation etc.

- *Administration of inspection relevant master data*

Data on the inspection process are managed here, including crop production, cultivated plants, areas, the exact location of fields (field numbers), forecast and (ex post) actual harvest amounts, the species and numbers of livestock.

- *Portal for inspection and certification:*

This is an instrument for inspection and certification bodies to use to improve their internal organisational structure (and effectiveness) by providing a comprehensive description of the expertise, preferred areas, list of negatives and the audits performed by an inspector. Additionally the audits can be provided to inspectors electronically.

E-cert Optional

- *Administration of inspection service management and certification standards*

This module enables the autonomous and individual creation of inspection services and guidelines. Several checklists can be created dynamically,

depending on requirements, and made available to the inspectors. This tool is particularly interesting for inspecting and certifying bodies that conduct inspections for several label programs or standards.

- *Documentation management and communication*

This is an electronic archive for relevant documents (certificates, manuals, records, faxes) as well as for communication (e-mails, discussion protocols, etc.).

- *Time and cost recording*
- *Invoicing*
- *Offline version*

The offline version enables paperless inspections using a laptop or tablet PC on site at the customer's premises. The data is entered into the system by the inspector and then, on his return to the office or from any internet workstation, transmitted to the central server. Synchronisation of the data takes place automatically. In order to avoid version conflicts, the data is stored by the inspector on the local hardware (laptop or tablet PC), and write-protected for the other staff. A file history provides information on any data which are altered.

E-Cert Optional Web Module

- *Portal for inspection and certification*

The inspection and certification portal enables inspection and certification data to be passed to external organisations and inspectors/certifiers. The data can be entered via the web and transmitted to the central server. This tool is particularly interesting for companies with many field stations and partners**.**

- *Portal for consumers*

This innovative portal gives customers and authorities the opportunity to download the desired data from companies via e-Cert in the most up-to-date version. Customers can enter and update the inspection sheets themselves via the internet and download certificates and test results. Authorities and other authorised institutions have access to defined data.

The DCPS provides very detailed data at farm level and to some extent also at processor level. The electronic administration of inspection relevant master data can be seen as important for statistical analysis. Data collection is mainly carried out during the inspection process within a very short time frame (or even online); data are transferred to a central database for the further certification process. Data input can also be via the web portal for consumers, where surface or animal data can be updated directly. In principle each inspection/certification body operates its own database on a file server; if different partners need to share information, data exchange can be achieved via a joint web server. To ensure data security, only authorised users have access to confidential and sensitive data.

The data quality of the DCPS (as defined by Eurostat 2003) was assessed as follows by the interviewees and expert opinion.

Table 17 Data quality assessment e-cert (supply chain level)

Relevance	The DCPS meets the needs of current users; statistical concepts and methods are not a major concern for the DCPS and therefore are not sufficiently addressed yet.
Accuracy	Due to the full census methodology, data accuracy is excellent.
Timeliness and punctuality	The data is available very quickly.
Accessibility and clarity	Data is accessible only to authorised persons and institutions. The clarity is adequate.
Comparability	The DCPS must improve its comparability with official statistics e.g. the nomenclature used.
Coherence	So far there is too little experience to make an assessment.

2.6.3 Project 'A chain information system for organic production in the Netherlands'

The project 'A chain information system for organic production' is a joint action by private organic companies and research institutes in the Netherlands. The companies involved are:

- Skal, the Dutch certifying body for organic production
- VBP, the Dutch association of organic production and commerce companies
- Biologica, the umbrella organisation for organic farming and nutrition
- LTO Nederland (the Dutch Organisation for Agriculture and Horticulture), department of organic agriculture. LTO is the umbrella organisation for five regional and sixteen sector organisations in agriculture and horticulture, with particular focus on political activities.
- Wageningen University and Research Centre.

The main reasons for the partners to undertake this project were:

- future requirements on tracking and traceability in connection with the EU General Food Law;
- recent scandals which cost a good deal of money in the short term but, more importantly, had a negative long term effect on the image of organic production;
- to increase profitability by more efficient information exchange in the organic food chain.

The aim of this project was to develop a supply chain information system that would provide solutions to these problems. However, in the course of the project it became apparent that there was no common understanding amongst the participants of what type of information system was actually needed. It was not clear which information was really necessary nor who was responsible for providing the information of for paying the additional transaction costs. It was concluded that support for a common DCPS was too weak and therefore a decision was taken to develop a shared vision

first before proceeding to an actual DCPS. In general, agreement was reached only on the function of a new DCPS, aiming at

- improving product quality assurance
- increasing consumer confidence in organic products
- reducing administrative burden
- highlighting corporate social responsibility
- enabling knowledge exchange between entrepreneurs, stimulating innovation
- rapid tracing of bottlenecks in the food supply chain
- improved knowledge of regulations and their application

Based on these points, four main aims for a new DCPS were formulated:

- efficient information supply and product quality assurance
- relief of administrative burden
- enhancement of (farm or chain) management
- improved marketing and image of organic products

These aims are connected to both to external functions such as quality assurance and control, but also to private needs, such as creating added value. Currently this vision and aims are being formalised with the idea of setting up a project group to undertake the implementation.

2.7 Eurostat

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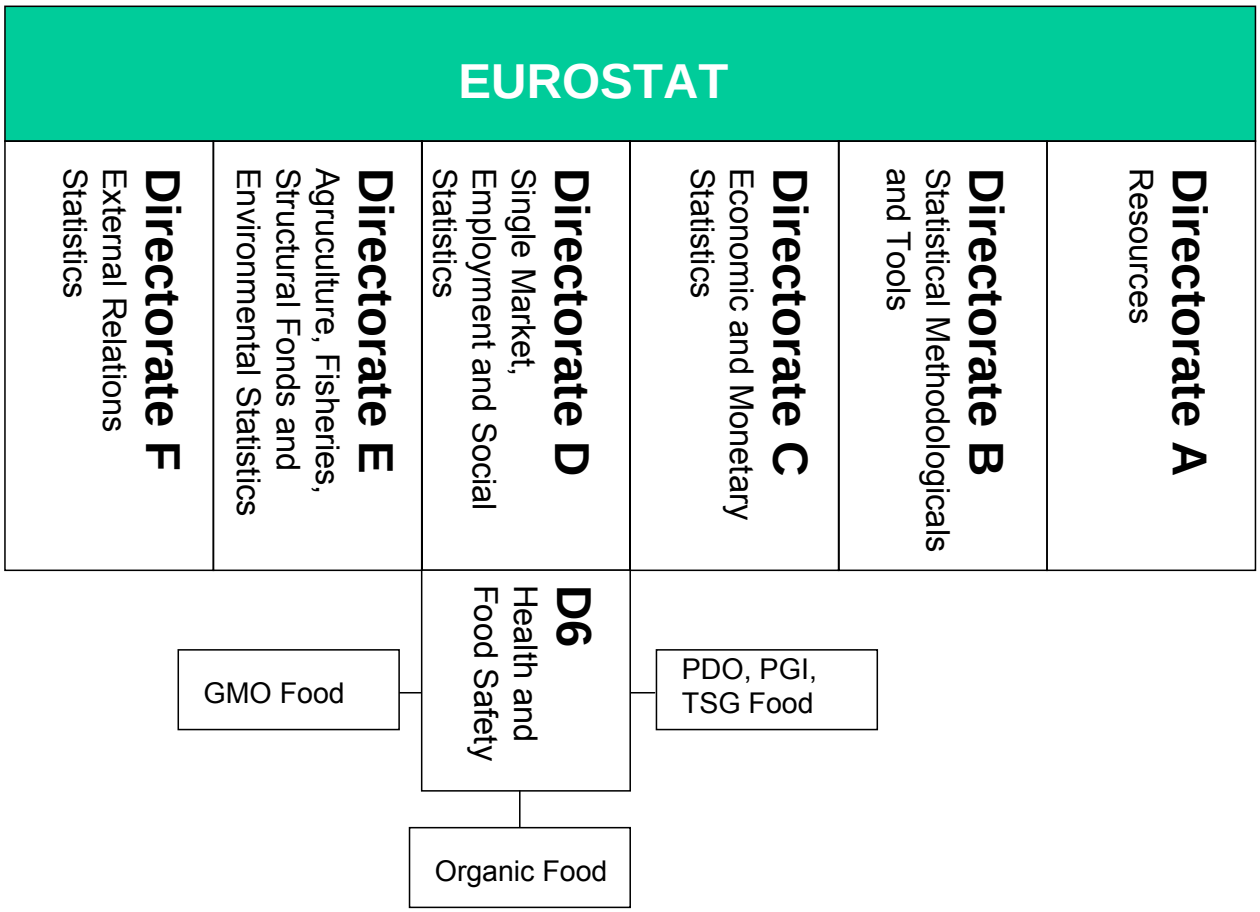
Eurostat is the Statistical Office of the European Communities, situated in Luxembourg, which aims to provide the European Union with statistics at the European level which enable comparisons between countries and regions.

Eurostat is divided in six directorates. Currently the organic farming sector is the responsibility of Directorate D6 (Health and Food Safety), having been removed from Directorate E (Agriculture, Fisheries, Structural Funds and Environmental Statistics) (see Figure 7). Organic sector statistics are dealt with by D6, together with other food supply chain products with distinctive labels (such as GMO, PDO, PGI and TSG food).

Figure 7 Organisation of organic farming statistics within the Eurostat directorate structure



The interest of consumers and market actors in organic products is recognised, as is the role of organic farming in rural development and farm economics through the maintenance of sustainable agriculture and of employment in rural areas. Consequently, the European Action Plan for Organic Farming adopted by the Council clearly states the need for statistics on organic farming. Data on production and trade are very important for DG Agri together with consumption and prices all along the supply chain. In addition, politicians and market actors in member states require data about the organic farming sector.

The current data collection situation for the organic farming sector presents some challenges which will need to be addressed over the next few years:

- absence of figures in the EU data base although they exist in member states,
- appropriate terminology and use of nomenclature,
- differences in data collection, processing and storage between administrative data and results of surveys,
- complexity of information flow.

According to the information which is available, the main types of surveys covering the organic farming sector in the various EU Member States are:

- general census of agriculture;
- survey of the structure and production of agricultural holdings or administrative data.

At present the data available on organic operators, area and livestock (farm structure data) is collected by DG Agri from the Member State ministries of agriculture on the basis of information reported by the certification bodies. The data should be provided annually by the 1 July, but there are still many gaps for many Member States.

The following information is taken mainly from the Eurostat task force report 'Data on organic farming' (ADUA, 2004).

Farm level

General census of agriculture
In 2000 the general census of agriculture collected data on every single agricultural holding which reported that it was involved in organic farming. Given the lack of correspondence between the official list of organic farmers supervised by inspection bodies, the respective lists approved by the regional authorities and the self declarations of farm operators concerning the use of organic methods of farming, there is a risk that data may be collected on organic holdings which, according to current Community legislation, are not in fact organic. The census nevertheless remains the best source of information on the sector, provided that it is possible to make a correct identification of the holdings which are actually involved in organic farming.

Survey of the structure and production of agricultural holdings
The two-yearly Community Farm Structure Survey (FSS) of the structure and production of agricultural holdings may reveal features of organic farming. The problem which arises concerns the methodological difficulty of proper extension to the data universe, given the low rate of representative data of organic holdings among the units sampled in each individual region. Further problems occurred:

- it is not known whether the whole farm or a part of the farm is managed organically;
- Member States gave different interpretations to what had to be collected under the heading 'organic farming'.

Surveys of administrative data (EEC No. 2092/91)
Community legislation provides for appropriate checks to be conducted on the production process and on products obtained using organic farming methods. The questionnaire asks for information at national level on organic operators, (producers, processors, importers), crop areas/yields, livestock production and products and the economic activity (NACE).

These operations are generally carried out either directly by the national ministries of agriculture or more often by suitable inspection bodies which, in accordance with the inspection duties they perform, collect and pass on to their respective ministries of agriculture administrative data on each agricultural holding involved in organic farming. These data are disseminated as such or processed as official statistical data. However, the degree of questionnaire completion varies country by country.

The problems relating to this method of investigation concern the precise identification of the features to be surveyed caused by the different definitions,

classifications and nomenclatures which are used. Furthermore, no regulation exists to impose more detailed data collection.

On the basis of the information which is available, it seems possible to improve the methodology for the use of administrative data which is required to obtain accurate and detailed annual information at NUTS-2 (regional) and NUTS-3 (provincial) levels with regard to:

- organic holdings, areas under specific crops, potential or gross organic production, certified organic products;
- organic livestock, numbers per species and category of animal, potential or gross organic production, certified organic products.

Processor/wholesaler/retailer level
Potential or gross organic products derived from crops or livestock in accordance with organic farming methods may be processed and distributed as ordinary products or certified by the relevant inspection bodies and sent for processing and distribution as certified organic products in accordance with current Community legislation. For the processing and distribution sector, the information which is available is very scarce, not standard and often collected by private bodies in only some EU Member States.

In the light of experience and available information, it is considered necessary to improve statistical knowledge of the scale and value of processing and distribution. In particular, it is considered that it would be useful to look into two possible paths of research:

- to conduct a suitable annual sample survey of production and processing undertakings, and among these only those which are involved in the processing and/or distribution of organic products;
- to conduct a suitable annual sample survey of wholesale and retail distribution of organic products to end consumers.

At present, only the number of processors is reported according to Council Regulation (EEC) No 2092/91.

Trade level
At the moment there are no data available concerning the volume and value of internal and external trade with organic products. With regard to information on imports and exports of organic products by individual EU member states, the difficulty concerns the possibility of including suitable codes for such products. A solution might be to have new codes at least for the main individual items or some of the more important groups of products. At present, only the number of external traders and the countries of origin can be reported according to Council Regulation (EEC) No 2092/91.

Consumer level
On the consumer level at the moment there are no data available at the European level. It is considered important to examine this sector more thoroughly, possibly by using the survey of household consumption. In this instance, it is necessary to look at the public and private statistical surveys carried out in some EU Member States.

Eurostat is planning to initiate a European task force on 'consumption of food with distinctive marks' (including organic food) in 2005.

Prices of organic products
There is generally little information about the production and selling prices of organic products. Few prices are held for Member States and data collection is not standardised. In this case, it is necessary to look at the public and private statistical surveys carried out in some EU Member States.

It could also be possible to survey the prices of organic products as part of the price surveys which many EU member states have been conducting for years. This proposal could involve surveying the production and selling prices of a small number of significant products.

Information concerning the data quality of Eurostat DCPS referred solely to farm level data because of the lack of comprehensive data sets on the other levels of data collection.

Table 18 Data quality assessment EUROSTAT (farm level)

Relevance	There are two different sources of organic farm structure data i.e. FSS and EEC 2092/91. Based on different methods of data collection and nomenclature as well as specific national interpretation of FSS guidelines, data just give a very rough overview of organic farming in Europe. This does not fully satisfy user needs.
Accuracy	FSS: It is not known whether farmers provide information correctly with regard to their production method (organic farming), nor how many of the farms are certified as organic farms or just produce under organic regulations in accordance with the national agri-environment programme. It is not known what percentage of the plant and animal production of farms in total is managed organically. EEC No. 2092/91: Reported data in many countries do not cover the whole structure data sets of the certified organic farms. National questionnaires often are not filled completely due to missing information on national level.
Timeliness and punctuality	DG Agri OFIS data are available online. However the timeliness for many Member States is unsatisfactory.
Accessibility and clarity	Accessibility of data is easy and free for all potential data users. Clarity of data is not sufficient because there are no interpretation guidelines which declare national specifics in data collection, processing and reporting.
Comparability	Comparability between countries and between time periods is not yet possible.
Coherence	There is no coherence between the two sources of data, EEC No. 2092/91 and FSS, with regard to nomenclature and definition.

2.8 Other investigated DCPS

Regarding the UK case study, the following areas of activity have not been evaluated in detail due to the lack of progress in their development. However, in some cases the ideas might be relevant for future work.

2.8.1 Expenditure on Food Survey

A diary page with questions relating to organic food purchasing and consumption by households was planned to be piloted with the intention that the questions should be included in the full Expenditure on Food Survey from April 2005. Neither the pilot nor the main survey took place due to funding issues, although it might happen in 2006 with publication end 2007.

2.8.2 Consumer prices

Another branch of DEFRA Statistics Division was keen to establish a new initiative to obtain price data, linking to existing initiatives from the Soil Association and others, subject to resources being made available. A working group to develop this initiative was also planned. These initiatives were not progressed due to lack of resources. Instead, a more limited monitoring of supermarket internet/home delivery websites (Tesco, Waitrose, Asda, Sainsbury) has been implemented. The data have not yet been evaluated as DEFRA wants to run the process for a few months before publishing work. It is possible that internet shopping prices may be higher than in retail outlets, although it may be possible to obtain some indication of this from www.tesco.com/pricecheck.

2.8.3 Retailer data

The English Action Plan for organic food and farming set targets to increase the level of organic food self-sufficiency to be more comparable to the conventional sector (70% target by 2010). As part of the monitoring of this it was hoped that the British Retail Consortium (BRC) would be able to provide data on the origin of organic products sold by their members. Initially, the BRC started collating data and supplying percentages for primary products. DEFRA requested an explanation of the BRC methodology used which apparently involved a straight average of percentages from each member (i.e. not weighted by sales share), so values obtained were not very helpful. Not all retailers are members of BRC and some members did not want to contribute for confidentiality reasons. Some retailers maintained that they did not have the information but that it might be possible to get data directly from suppliers. Ministerial meetings with supermarkets did not help secure significant improvements. DEFRA's own internal evaluation of this data was also not encouraging. Organic consumption and retail data could be extracted by market research companies such as TNS quite easily from their databases, but these data are usually not publicly available and are potentially quite expensive.

2.8.4 Dissemination

DEFRA Statistics Division plans to extend the web-based dissemination of data and more information, e.g. production and income data, is now available on line. Responses to ad-hoc requests for information are also an important dissemination mechanism. The annual DEFRA report '*Agriculture in the United Kingdom*' now has an organic chapter focusing on production data. The Soil Association is now using DEFRA production area data in their annual report as some certifiers are no longer supplying data directly to the SA. Some methodology issues remain to be resolved with SA before DEFRA can be fully confident in their data.

3 Analysis of the DCPS in regard to problems and barriers identified in SWOT analysis

3.1 Introduction

The aim of the SWOT analysis was to point out strengths, weaknesses, opportunities and threats for different data collection and processing systems (DCPS). The analysis of strengths and weaknesses (S-W) in the DCPS should show whether they arose because of:

- facilitation of data collection and processing,
- data quality improvement,
- funding issues,
- legislative issues,
- administrative issues,
- cooperation with data providers (e.g. certification bodies, retailers etc.),
- cooperation with national or international statistical agencies.

The analysis of opportunities and threats (O-T) should demonstrate potential ways to overcome the weaknesses identified in the S-W analysis. Other important issues include innovations in comparison to the systems used previously and whether the system could be used for data harmonisation on a national level or is suitable for international implementation. Threats should describe barriers and problems for data harmonisation and the barriers for implementing the system on the national/ international level. This analysis should document:

- identification and description of critical points,
- description of barriers and problems arising during the harmonisation/ improvement process,
- proposed solutions.

3.2 Problems and barriers identified on the actor level (based on S-W analysis)

3.2.1 Producer level (PL, NL, UK)

Strengths

Data collected on the producer level in case study countries came from administrative sources (certification bodies) and the Farm Structure Survey (FSS). The administrative data sources that exist in NL, PL and UK provide a complete overview of organic operators because of the legal requirements for certification bodies to supply data on organic farming. Information on post codes facilitates the regional breakdown of data (NL, PL, UK). The quality of data supplied by certification bodies could be verified by tests performed with special software. There is a potentially close link between administrative data and statistical data from the FSS. The goal is to better integrate all databases with the possibility of comparing output data (NL, PL, UK). Attempts have been made to use a ‘whole farm appraisal’ approach to link various data sources on the production level (UK).

Generally, there is good cooperation between data providers. The Polish Central Statistical Office (CSO) established cooperation with GIJHARS (supervision body in the organic control system) in order to determine the possibility of using GIJHARS data for the Farm Structure Survey. This enables the matching of data from various systems to achieve a full description of different features of organic farms.

In NL and PL electronic systems were developed to facilitate data collection. Skal, the Dutch certification body, improved an existing data collection system by developing a new information system, called PIM (Program Inspection Module). PIM is an application similar to Excel which runs in a Windows environment and will be put to use by inspectors in the near future. This system, described as more user-friendly, provides a direct overview of the groups of farms within the system. Additionally, PIM reduces the administrative workload for farmers and Skal and data is available soon after the inspections of farms and other operators have taken place.

Weaknesses

The lack of harmonisation in the nomenclature used is perceived as one of the major weaknesses when collecting data on organic production. At present there are no unified methods or common definitions, especially with regard to the Farm Structure Survey. The variety of IT systems to facilitate data collection could be perceived as a weakness, since considerable work must be undertaken to adapt them to the needs of an internationally harmonised data collection system.

The cost of existing data collection systems is high (especially for hardware and software). There are no incentives (unlike the French payment per record system), and ultimately this hampers the willingness to provide data. In this context there is a preliminary proposal to determine which organisation will shoulder the costs of data collection.

Poland, as a New Member State, made significant efforts to develop an organic DCPS before accession. Since it was created before legal acts were adopted, there is a need to adapt the system to the current legal status and the needs of various stakeholders. Also, the national act of 20 April 2004 on organic farming lacks a straightforward provision concerning the reporting obligation of production data.

The lack of cooperation between certification bodies and existing competition hinders the exchange of information on an international level, and this could also be an obstacle to the harmonisation of an organic DCPS (NL).

3.2.2 Price level (IT, DE)

Strengths

The system of price reporting in DE and IT covers both wholesale and consumer prices. In both cases there is good and active cooperation with data providers. However, in IT data providers are not paid for their services and in some regions of DE (Hesse, Bavaria) complementary data procurement costs amount to 10,000 € per year.

Prezzibio in IT is a unique 'Observatory' of organic price levels. Since no similar initiative existed previously, it can be considered an innovative approach to DCPS. The Observatory is capable of presenting one point of data collection available in disaggregated ways in other sources. Prezzibio data contain information about all supply chains, thus the data can be considered as complete. It is possible to compare prices over time and across the country. Data is published free of charge on a regular basis.

Analysis of producers and wholesale market price reporting in Germany is based on a standardised data input mask. All results or evaluations are input using standardised masks and this allows for direct publication on the website or further processing for the printed report without any additional effort. Prices can be transmitted electronically.

Weaknesses

There is a lack of funding stability. Budgets are not sufficient to observe and analyse the whole organic market in as much detail as for conventional prices. The lack of common protocols for data collection at production and distribution levels creates problems concerning the price definition of product categories. Problems exist in relation to the standardisation and harmonisation of data nomenclature, thus the DCPS has to create unnecessarily large categories of products. The census form is quite extensive for the product range of fruit and vegetables. Most enterprises use it only as an 'impulse' for providing data. That is why the sequence of products via sales lists/sales faxes is often quite different from the data input mask (DE). The cost of adjusting data provided to the structure of the census form/data input mask are high since prices originate in part from different trade levels. Accordingly, prices have to be converted and experts have to decide which prices should not be used. As a result, electronic data acquisition will not be possible.

3.2.3 Farm incomes level (UK, PL)

Strengths

In the UK system, the existence of the Farm Business Survey (FBS) with its legal basis makes the establishment of an organic farm survey much easier. Data quality is high due to the detailed producer survey and specific sampling of organic farms. Procedures for selection of comparable conventional farms allow compilation of economic results for organic and conventional farms. There are also special software solutions to control the data by various tests. Third parties have limited access to the data. Only the farmer and advisor during inspection activity can access source data. This prevents potential data manipulation and distortion (UK).

Weaknesses

There is no legal basis to support collection of data related to organic farming. Low demand for such data can hinder initiatives on the national level (PL). The current absence of a clear incentive system to encourage farmers to take part in the survey is seen as a crucial weakness of the DCPS. It is not an easy task to convince farmers – beneficiaries of the programme – to cooperate. Voluntary participation in the survey

is perceived as a problem in both PL and the UK. It has been repeatedly stated that financing issues pose the main problem in initiatives connected with organic farming. The lack of additional resources prevents inclusion of a representative sample of organic farms in the FBS/FADN.

Other problems raised in the case studies involve the small sample size, lack of representative nature and the issue of correct identification of organic holdings in the main FADN sample.

3.2.4 Retail/consumer level (CH, DE, DK)

Strengths

Data quality is high in all the systems investigated, despite the fact that there are two sources of data – retail/consumer panels (CH, DE) and national statistics (DK). In CH high quality standards are subject to regular checking and improvements. In DE coordination of the data from the various panels helps to overcome the weaknesses of individual systems. As a result, market coverage is high (66% of organic consumption) and all types of retail outlets are covered. There is good cooperation with data providers. In DK there is a good cooperation between users and providers and protection of providers' business interests. CH and DE are good examples of co-operation with private market research companies.

The systems provide little administrative workload since they are based on scanner data delivery. DCPS in CH, DK are perceived as user-friendly, data is easy to analyse and to use. Moreover, it is also possible to compare monthly results (CH). In DK the existence of separate bar codes enables data to be obtained directly from bookkeeping records. In DK the data collected is harmonised with data from household budget surveys.

Weaknesses

Retail/consumer DCPS are constrained by the high costs of data collection and lack of funding continuity. Data accuracy depends essentially on the correct identification of organic products. Product identification by private consumers is still a weakness, especially for products which are sold loose such as fruits or vegetables. This is also true for the GfK diary approach. Many mistakes occur when the reporting household completes the diary/codes their purchases. In the ACNielsen retail panel, the sample of shops is not representative and does not reflect the real share of organic retail shops.

In DK the existing system does not cover all retail sales of organic products but the sample is larger than the one used by the private market research companies in CH, DE. The system may have minor inaccuracies due to conversion of wholesale sales to retail sales. Another inaccuracy concerns wastage of organic food products in general stores supplied by wholesalers, which may give rise to a small overestimate.

3.2.5 Supply chain level (AT)

Strengths

It should be emphasised that the e-cert and BSM systems result from improvements on a data collection system which already exists in terms of efficiency, data availability and costs of data collection along the supply chain. Both systems simplify the manner of data collection through electronic recording of data supported by IT hardware and software, and the use of such IT solutions means decreasing workloads. As a result it was possible to reduce the costs of the DCPS to offset the additional costs associated with software licensing and staff training. Moreover, both systems use a standardised data input mask, are user-friendly and feature easy-to-use data input. The new approach in the BSM data collection system is that data becomes available just after input into the system, which means in 'real time'. This system provides product flow traceability and covers the supply chain from 'farm to fork'.

Improvements in the DCPS in the e-cert system increased the effectiveness of the inspection and certification processes through online forms. e-cert employs digital collection, processing and storage and impacts positively on traceability in the certification process for actors along the supply chain and for public authorities.

Weaknesses

The main weakness involves different standards for certification (e.g. different farmer associations) which require flexible data input masks. Experience shows that harmonisation of certification standards (e.g. nomenclature of products in different countries) is a long term process. Another issue raised as a weakness is the question of funding. High costs for data collection and processing, as well as the cost of making data available for statistical purposes, have to be covered by the public (respectively public authorities and other users). Costs related to staff training and additional hardware and software are also perceived as a weakness.

At present there are no clear (legal) conditions for data use for statistical purposes and there is no public/ statistical use of the data. Nevertheless, data is already being forwarded to the respective supervising authorities.

Data collected in both e-cert and BSM have a wide scope and could be a valuable source of information about organic products along the supply chain. However, the opportunities for accessing this data and using it for statistical purposes remain limited.

3.2.6 Trade / import export level (DK, UK)

Strengths

In DK, data on foreign trade in organic products is already included in the foreign trade statistics and could be extracted from the data on similar conventional products. The data quality of the foreign trade records and registers on businesses certified for production, processing and trade in organic products is high.

Statistics Denmark can make mandatory requests to private enterprises for the reporting of statistical data and to check information from various public data registers. These issues are covered in national regulations on statistics. Certification and control of farms and enterprises involved in organic production and trade is carried out by two national institutions and their registers are available to Statistics Denmark and to the public. In the UK system there is a clear legal framework for Port Health Authority action.

Statistics Denmark cooperates with the Plant Directorate and the Veterinary and Food Administration, which maintains updated registers on businesses certified for production, processing and trading in organic products. In the UK there is a good relationship with Port Health Authorities and Customs and Excise.

A positive aspect in the financing issue is that DEFRA does not incur any costs – costs are incurred by data providers. Statistics Denmark can estimate total annual costs for data collection so they know what to expect.

Weaknesses

One of main weaknesses of data collection and processing is the fact that the response burden for businesses involved in foreign trade is high due to the monthly reporting to two foreign trade registers (DK). Probably the collection of data on foreign trade in organic products can only be carried out by national statistical offices, since it involves the matching of data from several public data registers (DK). Foreign trade in organic products is probably underestimated due to the fact that many businesses are relatively small and therefore below the threshold for reporting of intra-European trade data to Statistics Denmark.

Many of the businesses involved in foreign trade in both conventional and organic products have difficulties in differentiating between organic and conventional products in their accounting system. If organic products traded internationally are not marked in such a way that they can be identified in the accounting system, the risk of inaccuracies may be considerable. A similar problem exists in the UK, where the lack of formal product classifications prevents organic products from being recorded separately.

The idea of using private certification bodies as a source of information on foreign trade in organic products may be difficult to realise. Private certification bodies may be not interested in providing information due to the extra workload involved and they will also have to seek consent from their customers.

3.3 Analysis of DCPS with regard to opportunities and threats (based on O-T Analysis)

3.3.1 Production level (PL, NL, UK)

Identification of critical points

Efforts are being made to harmonise data from administrative and statistical sources in order to link various databases. The most important barrier to harmonisation is the lack of common definitions, e.g. of product groups, exclusion of small farms and

rented natural ground (NL). Clear and unambiguous definitions of individual crops and animals in organic farming are essential to ensure proper coding and data comparability.

The Skal DCPS provides an opportunity to generate overviews on the level of product groups. Breakdown into products groups is often tailored to the inspection requirements of certification bodies (NL). However, the comparison of FSS 2005 results with data from Skal inspections is planned to generate more output harmonisation. Preliminary analysis showed that output harmonisation is possible. Input harmonisation still remains a vital question. One proposal is to use the same unique common identification number to link data from the certification body and the FSS. Another issue that requires particular attention involves data quality. PIM software contributes to the level of data quality, that is, the programme can identify major errors. Certification bodies may fail to supply data or data of suitable quality. One of the most critical points concerns the publication of data in terms of data security and implementation costs.

Proposed solutions and conclusions

There should be a link between FSS and administration data in order to have more accurate and comparable information on the production level. The DEFRA 'whole farm appraisal' approach, currently under development, might provide a model for use elsewhere in the context of current discussions at the EU level (UK). A similar approach is being proposed in NL where further development of PIM, including information on crop levels together with a common identification number, could permit use of this system for data harmonisation at the national level at least.

A system of incentives should be created to encourage certification bodies to forward data. Introduction of uniform means of data acquisition in the whole EU by suitable legislation would also be helpful. The need for a mandatory data submission form for all Member States was raised. A possible solution to making data transfer more efficient would be to provide the inspectors collecting data with portable equipment with a direct connection to the database in their unit. The possibility of direct data downloading to the central server would permit timely forwarding of data. Work on output harmonisation to integrate and efficiently use data from administrative and statistical sources was regarded as very important.

There is a lack of harmonisation in nomenclature and classification and this constitutes a barrier to the unification of various DCPS at national and international levels.

One issue of particular concern is the quality of data that depends entirely on the competence of certification bodies. The system must ensure appropriate quality of administrative data. Existing software can contribute to higher data quality, e.g. PIM can identify major input (factor 10) errors (NL).

3.3.2 Price level (IT, DE)

Identification of critical points

Nomenclature is not harmonised and there is no stability in financing: these factors have an impact on how these systems function. There are difficulties in obtaining data at the production level because farms which sell directly to cooperatives and farmer associations are not able to provide the product price. In view of the rather heterogeneous structure of reporting bodies in DE, any proposals to facilitate data collection, e.g. by means of an online recording, will not be feasible. There is an assumption that any attempt to use a particular structure will result in a lower level of reporting and reduced data quality. The number of enterprises participating in price data collection should be kept at a high level and should be constant. This may be difficult to achieve in countries with a growing concentration of wholesalers and increased competition among organic wholesalers.

Proposed solution and conclusions

Until the Prezzibio project, no other DCPS in Italy had collected data on organic products prices for entire supply chains, from production to consumption. The Prezzibio DCPS could provide an example of data harmonisation. It might be possible to adapt this system to the international level if the limits of data accuracy can be overcome. The price collection system that exists in DE is considered suitable for national and international harmonisation of data but funding remains a key issue. Building cooperative relationships with other organisations offers a solution to the various problems identified, such as financing problems.

3.3.3 Farm income level (UK, PL)

Identification of critical points

The view that organic farming is still relatively unimportant and the number of cases that would be affected by any change too small may prevent further changes being adopted. There are still no proposals to increase sample numbers, ensure the samples are properly selected and that relevant weighting is given. For the FADN survey (no targeted selection) there is no data to permit selection of a representative sample of organic farms.

Proposed solution and conclusions

At this point in time the most important point to consider is what might be needed in three to five years time, assuming the organic sector continues to expand. The FBS project board would be willing to consider proposals for modifying the sampling and weighting procedures. These may be influenced by recommendations from EU FADN following the PACIOLI (Panel in Accounting, http://www.pacioli.org) workshops.

Use of the targeted selection method for selecting the sample of farms will ensure the sample includes an appropriate number of organic farms. The sample size for organic farm groups has been increased, helped by an increased number of organic farms captured centrally and easy access to the data for analysis. The move to more

information being collected on individual production enterprises is also important as a source of financial/benchmarking information. The current FBS system for identifying organic enterprises on mixed status holdings still has limitations and therefore cannot be recommended for wider adoption, also because the conversion status is not identified. However, if the proposal for a 2-digit organic identifier for all production enterprises is adopted, this could be considered more widely.

3.3.4 Retail/consumer level (CH, DE, DK)

Identification of critical points

One of the major obstacles to further collection of retailer/consumer data is the availability of financial resources, since most of the current activities are project based without long term funding. Another issue related to financial restrictions is the lack of purchasers interested in the data and this may limit the scope of the survey. There is a problem of correct registration of organic products by consumers, especially when purchasing from direct marketing. To avoid incorrect registration of organic products it will be necessary to find methods of identifying and correcting false registrations. The price paid will be an appropriate criterion.

Data collection is voluntary and retailers are free to take part in the data collection scheme so the problem will be how to convince a retailer to participate. If the reporting of statistical information is not mandatory when requested by the statistical offices the response burden should be compensated in some way. Analysis of the share of various sale channels is a prerequisite for the evaluation of the applicability of the data collection method used in the Danish survey on turnover of organic food products. Respondents may be reluctant to give such information because of market interests, so great care has to be taken to guarantee confidentiality and anonymity of the data presented. So far, in DE there are no valid data on all types of available retail channels. Now, both classical FMCG retail as well as organic retail shops will be covered. Based on special assumptions, total market estimation will be possible. The DCPS is considered an approach to all existing market data harmonisation. The DE project based initiative can contribute to harmonisation on an international level. However, this type of project only works in countries where an organisation similar to ZMP/CMA exists, e.g. in AT.

Proposed solutions and conclusions

High costs, the low share of organic food in the markets and low interest in data concerning retail/consumption of organic products could be seen as factors hindering data collection at the retail/consumer level. In DK, where supermarket chains generate a high turnover of organic products, there is a small number of wholesalers and this simplifies the process of data collection. All the supermarket chains and the independent general stores are included in the sample, the data are available to public, and the reporting of statistical information is mandatory. This gives better access to data often considered as confidential, although there are measures to ensure the confidentiality of data providers.

Another approach to DCPS at the consumer/retailer level is to contract harmonisation of data on organic consumption at the European level to a well-established internationally-oriented market research company (such as GfK, ACNielsen). This

solution would probably be cheaper than establishing a new public data collection system for organic consumption data. A private market research company would be also able to provide consumption statistics concerning products with distinctive marks (e. g. GMO, PDO products), which are relevant for current Eurostat activities.

3.3.5 Supply chain level (AT)

Identification of critical points

All the DCPS investigated offer an effective tool for certification bodies to provide harmonised data on the international level. Comparability of data is rather poor because of different nomenclatures (especially product nomenclature) in relation to other (national/ international) DCPS. A technical solution for dealing with different nomenclatures should be implemented to achieve uniform classification supported by a legal framework. Increasing volume of data is a problem in the context of compiling and storing this data. Although access to data is clearly defined by legal regulations, it is restricted to authorised persons and institutions. The issues that still need resolution concern the publication of data (data security) and the cost of implementation of such a system. It should also be emphasised that, to overcome weaknesses, a total quality management system should be implemented to ensure data security.

Proposed solution and conclusions

Technical solutions for handling different certification standards in one DCPS (e–cert) already exist, although agreement in principle has still to be achieved with the certification bodies themselves supported by clear legal frameworks. The e-cert DCPS provides a flexible technical approach for dealing with different nomenclatures and standards in one flexible data input mask. Effective and fast data collection and processing as well as an exact assessment of volumes (e.g. number of animals) ensure excellent data accuracy. ‘Real time’ data collection and processing in the BSM system, as well as exact assessment of volumes, provide excellent accuracy and timeliness of the data. Certification bodies can reduce data collection costs by combining administrative and statistical data collection.

The system provides all data along the entire supply chain. The European Action plan for Organic Farming clearly states that the current DCPS on organic farming have to be improved. The present case study provides a low cost solution to combining a total quality management approach with the collection of statistical data.

The BSM system is already harmonising data input from certification bodies as well as from processors, but only for organic grain. Taking into account technical considerations, the e-cert system can be used for national and international harmonisation of data. The DCPS is already harmonising data input from three international certification bodies (farm level and partly processor level). At the farm level especially, the DCPS provides an effective tool for the collection of high quality and up-to-date data. For national harmonisation of the DCPS, all control bodies as well as processors have to be integrated, which seems to be quite difficult without an adequate legal framework. From the technical perspective, the system can be also used for national and international harmonisation if the weaknesses identified can be

overcome. There is also a proposal to create an adequate legal framework for the collection and processing of data needed by inspection/certification bodies with the reimbursement/compensation of additional costs.

3.3.6 Trade /import export level (DK, UK)

Identification of critical points

One major reason for inaccuracies is the lower threshold limit for reporting of intra-European trade, and DK aims to further increase this limit. In countries where the reporting of statistical information requested by the national statistical office is not mandatory, the response burden on businesses will probably be the greatest barrier to data collection, since they will probably not be interested in participating in such statistical surveys. The private certification system may pose a barrier in many countries, partly because of the number of data sources from businesses certified for foreign trade in organic products, and partly because of an unwillingness to report such data due to the extra response burden and customer protection.

Another reason for inaccuracies and heavy workloads is the separation of organic products and conventional products in the accounting system. Some businesses already discriminate between organic and conventional products in their accounting system. If such surveys are carried out on a regular basis, other businesses will probably adapt their accounting systems to distinguish between organic and conventional products. In order to separate data on foreign trade in organic products, NACE classifications need to be modified. This may be a very critical issue since there is no willingness to make such changes.

Proposed solutions and conclusions

More knowledge is required about how to make businesses cooperate in data collection when reporting is not mandatory and how certification systems and registers are structured in EU countries to identify the best way to collect information on foreign trade in organic products in each country.

To extend the scope of import data to cover internal EU trade and exports to third countries would require a change of codes (NACE). This was the subject of significant international discussion, with little progress evident. Elements of this discussion can be found in Eurostat working group papers and the EISfOM Berlin Seminar proceedings. UK Customs and Excise have also decided that they are not willing to make classification changes to achieve this. The Danish experience with trade/import DCPS might be helpful in this context.

Certification bodies may be able to supply data on quantities purchased and sold by individual businesses, but in practice this would require improvements in information technology (see AT supply chain case study). One of the main issues that require further investigation is how to match registers on businesses certified for production, processing and trade with foreign statistics registers in order to identify the reduced population of businesses that may be involved in foreign trade in organic products.

It may be a challenge to transfer the method of matching registers on businesses involved in foreign trade in organic products with the foreign statistics register of the

statistics office, because certification and inspections may be carried out by several private companies. Moreover, it is not known whether certifiers can easily identify businesses dealing with foreign trade in organic products. For businesses below the threshold, a benchmark survey of their foreign trade in organic products could be carried out every five years in order to adjust the results reported on an annual basis.

4 Analysis of the DCPS investigated in the light of the recommendations made in D3

4.1 Introduction

According to the Technical Annex one of the main tasks of WP5 was to identify "*possibilities for standardising data collection (especially on production data), approaches to overcoming weaknesses in data collection (as identified in WP4) and identifying improved methods to generate reliable data and/or overcome barriers with regard to the implementation of such improvements, as well as identifying national core institutions for future data collection and processing systems*". Based on the recommendations generated in WP2/WP3 and WP4 the pilot applications described in Chapter 2 were used to test the recommendations in terms of practicability and implementation. In the analysis the relevant case study results are compared with the recommendations and expert estimations from D3 as well as the integrating the conclusions from the fourth project meeting in Warsaw, with the aim of providing a coherent picture on the various data levels across Europe.

4.2 Farm level (Production)

4.2.1 General Recommendations

Especially at the production level, **the establishment of common protocols for data processing and exchange to ensure harmonised quality management and improved timeliness** seems to be of crucial importance for the improvement of data availability and quality. In this regard, the approach identified in the Polish pilot application shows possibilities for facilitating data collection and improving data quality and timeliness by sharing responsibility among numerous authorities, market partners and certifying bodies. Although there is still progress to be made in the development of the DCPS on organic production data, the application of appropriate digital data recording and close cooperation between the respective units seems to be one way forward. The case study also shows that, at the moment, the participants involved in the data collection process act on voluntary basis which may means that the data is incomplete for some reason. In this context also the availability of financial resources for successful cooperation among various partners was raised.

For the long term sustainability and completeness of data collection, there was a call for a **compulsory (legal) requirement, with appropriate financial compensation, for certification bodies to supply specified administrative (2092/91) data, based on a common definition of variables**. In general, the Polish and the British case studies attested to the necessity for creating such a legal instrument to encourage certification bodies to forward data. It was also clearly stated that within such compulsory requirements instruments for financial compensation recognising the

additional workload for certification bodies should be developed to prevent an additional financial burden being imposed on organic farmers and processors. In the Polish case study in particular this point was seen one of the crucial requirements for inspection/certification bodies. In this context it is essential to determine which party will meet the costs of data collection. The basis for a legal regulation in Poland could already be found in the act on organic farming which obliges the certifying bodies to forward 'all additional information' and data to the chief inspector. Whilst in Poland the solution is seen to be the establishment of a legal framework, DEFRA in the UK is seeking to achieve results through voluntary agreement, persuasion and more targeted use of existing financial incentives. One of the solutions could also consist in paying inspection/ certification bodies a specific amount per specific data record, as already happened in France. The combination of compulsory (legal) requirement and compensation to the certification/inspection bodies was strongly supported by various stakeholders and experts. This argument was also put forward by experts interviewed in WP4. Alongside the still open question of resources for the financial compensation (which according to the expert estimates in the previous workpackage could mitigated by farming/agri-environment support programs), the various pilot applications on this level showed that the implementation of such an instrument on the European level will meet resistance in some countries, where this type of data gathering remains still a quite sensitive issue. Therefore it was suggested that responsibility for implementing a compulsory or legal requirement for certification/ inspection bodies to provide specific data or production be devolved to the Member States.

From a European perspective the results of the Eurostat case study clearly show that the attitude of the Eurostat organic farming task force is that the inspection/ certification bodies should be the source of organic farm structure data. In the process of discussing how to improve the organic farming sector statistics, some Member States in the Eurostat food safety working group worry about the possible costs that additional surveys could entail. DG Agri, however, has pointed out the fundamental importance of this data. Furthermore, they do not support the solution of adapting the legal framework make it compulsory for certification bodies to supply data. Once again the system used in France of paying inspection/certification bodies a specific amount per data record would be one solution, although in some countries certification bodies are not willing to deliver statistical data on their farms even with financial incentives. In this context it seems to be necessary to establish a system of incentives and/or legal requirements to facilitate the participation of certification bodies in enhancing and harmonising their data collection and reporting to Eurostat in accordance with statistical user needs.

In other countries it seems to be difficult for statistical offices to fund certification bodies in the context of general budget restrictions. However, the combination of legal obligation and compensation to the certification bodies seems to be the only effective way to improve organic farming structure data at the European level. It was also stated that even though the improvement of organic data collection and availability is a key element in the EU organic action plan, most, but not all countries, would be able to comply. In some countries, this type of data gathering remains a sensitive issue and may be harder to implement. A voluntary approach might help address this, but whether all countries would be willing to allocate sufficient priority and resources to organic farming data under a voluntary system remains in doubt.

In this respect one solution would be to support certification bodies in data collection by the development of common guidelines for completion of the Eurostat/DG Agri 2092/91 returns. The current absence of such guidelines is seen a significant factor contributing to poor returns in some countries. The development of guidelines should adopt a participatory approach to ensure that they are clear and appropriate to those organisations. The guidelines should clearly define the data required, as well as the minimum requirements that certification bodies are expected to meet in terms of data collection and the use of Eurostat nomenclatures.

From a purely technical perspective, the **development of IT solutions to facilitate the recommendations above, especially the use of on line forms for data collection** was proposed during the case study work. The Polish case study results in particular show that the development of adequate IT solutions still remains a vital issue. The DCPS system tackled quite radical solutions, such as equipping inspectors with portable computer equipment connected directly to the database, which could reduce administrative costs on the one hand and facilitate the data collection on the other. But the quite high costs involved meant that the proposal was not put into practice. During the case study another idea appeared, namely, to open data warehouses that would read specific structures of individual databases. Handling of individual databases by means of data warehouses could mean significant improvements considering that all harmonisation efforts have been inhibited because of the large number of countries in the European Union. But the modification of data collection and processing systems which already exist by the certifying bodies and other market partners remains the key issue. In this respect also the results of the Austrian case studies, which were mainly focused on this topic, show that from a technical perspective means of on line data collection are already available. It was clearly stated that, from a technical perspective, the use of on line forms for data collection has improved considerably over recent years, and therefore no serious problems would be expected. One of the most critical factors is the increasing volume of data, which causes technical problems of storage and processing. It was also agreed that the implementation of IT solutions by market partners along the supply chain (especially certification bodies and processors) after the start-up phase shows positive effects by reducing administrative workload through automatic documentation. In line with some experts' opinion at the moment, the investigated IT solutions are focused on specific levels or problems (e.g. TQM, certification/inspection) and therefore there is no experience of the implementation of a European solution. Specific experience in the case of expanded use of the DCPS is still missing. It seemed obvious that resources are a key issue in enabling certification bodies or (to some extent) fairly small market partners to modify their existing systems. Another important point mentioned was the handling of access to the DCPS (who is authorised to use which data) as well as data privacy concerns. In this case a strict legal framework for the use of data is required.

However, data are now stored partly in paper files and with a better developed IT framework, the data could be captured electronically which would make use for statistical purposes much easier. If they were given access to a sophisticated IT framework for easy data collection and processing, this could be an incentive for certification bodies to report statistical data about certified farms. Discussions with certifiers to explore the potential for IT solutions have already taken place in the UK and it seems to be important to focus more on this in future discussions with certification bodies.

Besides electronic collection and processing of data, **the facilitation of easy access to and timely and rapid dissemination of available data (especially regarding online access to data)** on the production level were picked out as a central theme. Because of the early stage of development of the Polish case study, it was not possible to assess the reliability of results. At the moment it seems that the information gathered will be distributed mainly in the form of printed reports, which will also be available online. Further development in this respect has already occurred in the UK case, where the online dissemination of data is now well established. The results in the Austrian study indicate that the combination of online data collection and online access has proved quite successful in facilitating easy access and dissemination of data, but has also caused some specific problems. It was stated several times that the handling of authorisation and access rights for potential users of the DCPS seems to be quite complicated. In the case of extended use of the DCPS tested, it has to be made clear which market actors and which (public) authorities have access rights and to what extent. This is crucial in ensuring data security for the different market partners. On the other hand it has to be made clear how the data gathered can or should be made available to a broader public. On the European level, coordination of on line access and availability of production data on organic farming should be regulated by Eurostat and DG Agri, in line with some current efforts and developments such as OFIS and the on line availability of IRENA agri-environmental indicators including organic farming data.

One means of facilitating data collection and processing through different authorities or market actors (e.g. certification bodies, statistical agencies, administrative authorities) would be to **establish a common operator identification number so that administrative and statistical data can be linked.** The idea here is that a single operator identifier should be used for all interactions with various government bodies, statistical agencies and certification/inspection bodies, with the aim of being able to combine and therefore analyse different data sources. In the Polish case study there has been an attempt to create a single identification number, but the task proved quite difficult. All the institutions involved felt that it should be an existing number, e.g. an identification number in a particular system or a number from a statistical register. However, each institution had a different idea of what the number should be. The GIJHARS proposed using a producer number assigned by a certifying body, a number from its own system or the identification number from the Agency for Restructuring and Modernisation of Agriculture (ARMA). The CSO proposed, for example, a number from the statistical registry, while the IAFE was completely opposed to the creation of a common identification number. The requirement to preserve the confidentiality of individual data and forward data in clusters comprising at least 15 elements was raised at that point. It the Polish case it seems that the best idea would be to create a brand new identification number and include it in all data collection and processing systems. However, the question of the legal and technical aspects of the problem remains, as well as the issue of financing. In the British case, the UK official holding number offers some potential for improvement, although it only applies to agricultural holdings. ‘Best practice’ in this case seems to the Danish approach, where the system of having a single operator identifier has proved quite successful but since it is based on the special legal framework for data collection in Denmark, it is only partly transferable to other countries. In the Netherlands both organic and conventional farms have a unique number in the annual Farm Structure Survey, with the option for Skal also to use this number in its registration. In some case Skal is already using this unique FSS

number, but this is not part of the normal information registration. Furthermore, several other legal requirements make use of that number to identify the farms. The use of a common identification number for different legal requirements could contribute to lower administrative costs for the farmers. However, there was some scepticism over the possible implementation of such a system on the international level since it is unlikely that all Member States would be willing to change their national statistical systems, and this view accords with expert opinions reported in D3.

As for the **use of expert yield estimates as the basis for estimating outputs from production areas and livestock numbers**, the Polish case study indicated that, with the recent development of appropriate and more reliable DCPS, the necessity for additional expert estimates is decreasing, particularly on the production level. Referring to other case studies it was stated that, especially on the levels where availability and/or quality of data are insufficient, expert estimates can be seen as useful complementary data sources. Hand in hand with the development of new DCPS on the production level, one aim should be **to establish coherent and durable systems to avoid frequent changes in requirements which entail additional costs (software, labour, data quality) for providers.** The Polish case study indicated that the creation of a coherent and durable data collection and processing system at the national level faces some difficulties. It was necessary to adopt a regulation that would lay down a framework for the establishment of the system and provide opportunities for stakeholders to participate. The question of how to avoid frequent changes within the system remains, and also the matter of who will pay for it. Respondents could not agree whether the stability of a specific DCPS affects data availability and quality or whether a high level of detail in the data would contribute to data stability. Although in general respondents agreed on the necessity for a clearer and more transparent picture of the European food market, the case studies provide fewer ideas which could be adopted on a wider scale than expected. A major point to consider in the establishment of a coherent and durable DCPS was said to be **that sufficient resources for the implementation of proposals, based on coherent justification of the needs and benefits, must be available.** The majority of the interview partners shared the opinion that the lack of continuing resources is still a major problem in the development of an adequate DCPS for organic farming.

General agreement was also reached that **the establishment of mechanisms to facilitate communication between statistical agencies, external experts and stakeholders and their involvement in data collection and processing (e.g. via specialist expert groups or networks and observatories), with key individuals given responsibility to promote or develop initiatives,** is a key area for further development, either on the national or the European level. The establishment of special working groups involving the main key actors would facilitate identification of needs and exchange of information between various stakeholders.

In a very general way, the Dutch case study provides an interesting approach to how to integrate various stakeholders into the establishment of an improved DCPS on organic farming data. The project ‘A supply chain information system for organic production’ aims to develop a framework for the collection and processing of relevant, timely and comprehensive data on organic production and markets. The project integrates researchers, officials and commercial companies and stakeholders in order to meet the data needs of policymakers, regulators, farmers, processors,

traders and other interested parties. During the project period it appeared that there was a different understanding among the actors involved about the type of information that is actually needed and who should carry the additional transaction costs.

In the light of the development of proposals in the EISfOM project for the harmonisation of data collection and processing systems in organic production supply chains, the following important aspects can be identified from this Dutch project:

- a shared vision, ambitions and commitment are an essential precondition for setting up a collective information system;
- the public and private functions of such an information system should be clearly identified;
- an organisational structure showing the relevant stakeholders should be developed in order to set up and maintain the information system, and this also implies that financial matters should be properly arranged;
- funding opportunities should be explored in order to carry out harmonisation projects.

4.2.2 Special requirements

Within the case study **the harmonisation of the Farm Structure Survey (FSS) and administrative (2092/91) data collection and reporting** was seen as one possibility for gaining more accurate data, especially on the farm production level. This was based mainly on a proposal for more accurate identification of organic activities in FSS. The Polish case study demonstrates some fairly positive approaches. In conjunction with Poland's accession to the EU the CSO was obliged to conduct a survey on the structure of agricultural holdings in line with the calendar and requirements of Eurostat. Because the CSO did not collect data about organic farms before this but relied on information from the GIJHARS, they decided to cooperate in order to determine the possibilities of using the data owned by the GIJHARS in the farm structure survey (replacing the statistical data with the administrative data). Because the range of data owned by the GIJHARS is narrower than the one required by the FSS, a decision was taken to collect data about organic farms in the 2005 farm structure survey. There are still very few organic farms in Poland (about 2000 at the moment) so all of them were included into the survey. The list of farms was made available by the GIJHARS, so the CSO was able to include all the relevant organic farms. The advantage of this type of approach lies in the possibility of controlling the data obtained in both systems, as well as verification of the administrative data. The survey results will provide a basis for further discussions about who will collect which data about organic farms. As a step towards simplification of the FSS and to avoid repeated visits to farms, the Inspection could collect data about organic farms.

In Britain DEFRA is taking positive steps towards this recommendation by seeking to integrate FSS and 2092/91 certifiers' data, particularly through encouraging the use of official holding numbers by certifiers. However, the problem of exclusion of small holdings from FSS and the non-separation of data on mixed status holdings in the FSS still remains.

In the Dutch case study a first step towards harmonisation was to make sure that the certification bodies have access to the EC 2092/91 annual registration forms. Another very important aspect that would be helpful would be the use of a unique identification number (see recommendation above). An interview with Skal revealed that they use totally different classifications for organic processing and importing companies. The Skal classification is more extensive than the EC 2092/91 classification of. The use of EC 2092/91 classification for these companies could mean a simplified administrative system and no major impacts on the financial contribution of those companies to Skal were expected. At the moment there is already an initiative in which Skal is testing the classifications for processing and importing companies.

On the European level it seems worthwhile to pursue the idea of harmonising and integrating FSS and EC 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 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.

Directly linked to the discussion of harmonisation of FSS and administrative data, the **need to ensure that organic samples in existing surveys are correctly identified and representative** was put forward by some of the interviewees. For the FSS the problem was mainly seen to be that the samples of organic farms within the survey may not be representative, nor are they correctly identified.

4.2.3 Farm level (Income)

The problem stated above of **ensuring that organic samples in existing surveys are correctly identified and representative**, seems also to be one of the key issues with regard to the Farm Accountancy Data Network (FADN). At the moment FADN is one of the key instruments for evaluating the income of agricultural holdings and therefore acts as an indicator of the impact of the Common Agricultural Policy (CAP). However, so far this could only be applied to a limited number of countries and types of farms. The most important restriction seems to be the number of (organic) farms in the FADN, although within the increasing number of organic farms in general the number of organic farms in the FADN will increase. In Dutch case study it was proposed that by adding of a separate group of organic farms to their sample would result in an improvement of data quality and availability. Alongside the problems identified with the correct identification of organic farms in FADN, the current weighting of organic farms in EU-FADN could also be improved. The respondents in the Dutch case study proposed that there should be no separate stratum for organic farms in FADN on the EU level but individual countries should be allowed to introduce a separate category. This would have the effect that for the EU-FADN the national data would be dealt with separately in the weighting procedure (post stratification[1]). A second proposal was to include a separate stratum for organic in the selection plan for organic farms[2]. This would mean an increase in the number of organic farms and therefore improve the reliability of important farm types. It was

[1] Weights per farm are recalculated afterwards by a comparison between the farms included in the sample and the farms included in FSS.

[2] This could result in a) extra costs because of the need for extra farms or b) lower reliability of the common farms (fewer 'common' farms in stratum).

suggested that in this respect DG Agri could be responsible for formulating criteria, specifying the number and share of organic farms in each member state, and also providing criteria regarding relevant sectors, products and types of farming.

In the British case study a document on possible improvements was submitted to the FBS technical committee working group on 21 June 2005 which recommended moving from the current system of only identifying a limited number of wholly organic enterprises on mixed holdings, to identifying all organic enterprises with a two letter supplementary code which could also be used to identify conversion status. It was said that the current FBS system for identifying organic enterprises on mixed status holdings still has limitations and therefore cannot be recommended for wider adoption, also because conversion status is not identified. However, if the proposal for a 2-digit organic status identifier for all production enterprises were to be adopted, this could be more widely considered.

In this context also the PACIOLI (AIR3-CT94-2456) Concerted Action was mentioned in connection with the objective of assessing the need for and feasibility of projects on innovations in farm accounting and its consequences for data gathering on the European level through the Farm Accountancy Data Network (FADN). PACIOLI has regular meetings about important issues concerning the FADN. A workshop about 'Micro Economic Data on Farm Diversification, Rural Businesses and the Intra-generational Transfer' is planned for 2005. Farmers are reacting to rural development plans by diversifying from farming into other activities which are partly farm related and partly not. The long-term sustainability (also for the next generation) of such business models is still unclear. Government policies influence diversification as well as profitability and sustainability by agricultural and rural policy, by subsidies and tax breaks. Such policies ask for evaluation, and therefore for micro economic data, which is a challenge for the Farm Accountancy Data Network and this will be the main topic of the 13th PACIOLI workshop.

In the Polish case study the collection of specific organic farming data through the FADN was viewed as fairly critical. Statistical offices stated clearly that it is not the objective of the FADN to collect data on organic farming. Rather FADN was seen as instrument to survey all agricultural holdings regardless of their conventional or organic character. Although in the survey questionnaire it is possible to identify whether the agricultural holding is organic or in conversion, it was emphasised that the FADN does not produce a full picture of the economic situation of organic farms since it covers only a fraction of them. Within the FADN the sample of agricultural holdings to be surveyed is selected at random (a total of about 12,100 agricultural holdings), a separate analysis of organic farms met with some scepticism. It was clearly stated that organic farms will be identified on the basis of the questionnaire but will be analysed in the same manner as conventional farms. A proposed solution for institutions interested in data referring only to organic farms can – as part of the order lodged with the Accountancy Division of the Institute of Agriculture and Food Economics – receive data on organic farms that are in possession of the IAFE. However, this will be only fragmentary information and will not offer a full picture of the economic situation on organic farms.

4.3 Retailer and Consumer level

The main result of the case study work on the retailer level and consumer level was that **the establishment of common protocols for data processing and exchange**

to ensure harmonised quality management and improved timeliness was seen as a crucial element for the establishment of an improved DCPS.

In this respect in the German case study the problem of accurate **organic product identification** was raised and debated. It was said that in data collection, processing and exchange, the most important issue on the consumer/retailer level with regard to quality management is the identification of organic products, and each product/ product group has its own identification problems. This was also seen to be true for the various retail chains. On the European level one of the main problems was the differences in product definition within the Member States, and the market structure adds to the difficulties. The identification of organic products which are sold loose without an EAN code (e.g. many vegetables, fresh meat or cheese) is particularly problematic and cost intensive.

The German case study offers an approach to the optimisation of data quality for each product group involving all major data providers (AC Nielsen, GfK and bioVista). ZMP is responsible for the coordination of data processing and puts together the global market data. For packaged products (sold in 'classical' food stores) a classical retail panel has been chosen. Thus, packaged organic goods bought in 'normal' supermarkets and labelled with an EAN code are collected by ACNielsen. Once a year ACNielsen checks the product lists in the supermarkets and classifies products into organic or conventional. Since this panel does not cover natural food stores, bioVista has been covering this part of the market. Since all of the products sold in these shops are organic, no classification problems arise here. Although the project is still running, most problems are expected with regard to the data collected in the GfK consumer panel because consumers have to identify organic products without an EAN code by scanning bar codes in a GfK codebook using a handheld scanner. After scanning the code, the scanner dialogue asks for a classification to distinguish between organic and conventional products. The most problematic product groups seem to be vegetables, fruit, meat, bread, cheese and processed meat. To improve data quality for these product groups, GfK and ZMP will check the data based on a price range approach.

In the German case study, **the definition of product groups** also seems to be a key problem area because each market research company defines its own product groups. For example, does ESL milk belong in the fresh milk group? Are mushrooms classified as vegetables or processed fresh salads? Does the meat product group also contain cooked meat? To which product group does soya milk belong? As in most data collection systems at the retail level, the organic data collection has little market relevance to the data collector and it is therefore difficult to persuade companies to change their national classification systems to a common protocol adapted for organic market needs. It was also said that – unless the organic market achieves a bigger market share – the demand for organic market data will be quite low.

In response to this problem in Germany ZMP, with GfK, has tried to accumulate various products groups within the project. Nevertheless, from the European perspective a satisfactory (if imperfect) solution of common product definitions should be attainable in the long run. As long as there is no demand for standardisation of classification systems on the European level, the impetus for private market research companies to establish common protocols will be slight. Thus, in order to promote

activities towards the development of a common protocol, it was proposed that a model of best practice should be established with the following objectives:

- to involve the countries where national systems already exist (e.g. the Netherlands, Germany, Switzerland, Austria)
- to bring together the market research institutes (GfK, AC Nielsen and others) from various countries
- to identify important product groups (e.g. milk, vegetables) and establish respective common protocols
- to propose the possibility of establishing further systems in other countries
- to grow step by step in relation to product groups, products, countries.

In this respect it was also recommended that a preparatory working group meeting should be held in Bonn in the summer of 2005. The need for this meeting was discussed in Berlin in 2004 and will involve ZMP/CMA, FiBL, LEI, AMA and other participants in the retailer/consumer workshop. The goal the meeting will be to develop a draft for a European pilot project for the consumer/retailer level. The draft should define:

- relevant products / product groups
- relevant retail shops to survey
- a cost frame for implementation
- a realistic time frame for the establishment of the project
- the partners involved
- the role of each partner in the project
- financing issues, such as support by the EU/Eurostat

In finding a solution for the product classification problem, the Danish approach shows that a combination of the COICOP classification system (which is already harmonised across Europe) in the retailer's accounting system and the use of separate marks for organic food products in bar codes could be one possibility to identify the sale of organic food products in supermarkets and wholesalers.

To facilitate the efforts of various stakeholders to establish common protocols on the consumer and retailer level the **development of IT solutions, including the use of on line forms for data collection** was recommended. In the German case study there was a strong recommendation for the development of an expert information/ decision-making system to support the consumer panel data identification by improving the price checks for the GfK diary-based data collection on the consumer level. GfK already has some experience in the use of expert decision-making systems for the evaluation of data derived from earlier projects in the 1990s.

The establishment of a harmonised DCPS on the consumer/retailer level is at a very early stage. To facilitate its development on the national and the European level, the **establishment of mechanisms which facilitate statistical agency, external expert and stakeholder communication and involvement in data collection and processing** was seen as important. The results of the Danish case study strongly support this argument. Statistics Denmark has established national user groups involving key stakeholders for the development of initiatives and improvement of the quality of data collection on the turnover of organic food products in retail shops. Similar user groups may be established in other countries. International virtual expert networks for public and private statistical agencies collecting such data may also be

established to develop initiatives to harmonise data collection and improve the data quality.

This idea was also supported in the German case where, within the development of a national model of best practice, the setting up of an extra-net (with stakeholders and experts) and regular meetings of the partners involved is seen as a crucial issue for success.

Concerning the **facilitation of easy access to and timely and rapid dissemination of available data (especially regarding online access to data)** the case study results came up with fairly controversial opinions. Whereas in Denmark there was an opportunity to put data on the website of the statistical agency with online access free of charge, in the German case the attitude was more restrictive, because of commercial concerns about who can sell which data. This was seen to be of major importance because the cost of obtaining panel data is usually quite high. Another proposal was that the relevant information could also be supplied to an international website for relevant statistical experts via appropriate links. The international website could be hosted by Eurostat or the international virtual expert network proposed above.

One of the expert recommendations made in D4 was **to establish a coherent and durable system which would avoid frequent changes in requirements and resultant costs for providers (software, labour, data quality)** as well as to **ensure sufficient resources are available for the implementation of proposals, based on a coherent justification of needs and benefits.** The case studies indicate the by involving all major data providers and organisations such as ZMP, AMA, LEI, ISMEA and Eurostat as well as the private companies AC Nielsen and GfK in the process, it will be much easier to establish coherent, durable systems. In terms of adequate funding it was pointed out that cooperative financing by public stakeholders (EU, national governments, Eurostat) and the other parties involved (ZMP, LEI, etc.) could provide data at reasonable prices for organic trade and producing companies to buy. Scientific institutions could receive data in exchange for scientific support, e.g. assisting in the development of quality management systems. Nevertheless, as long as the organic sector has little market relevance, data quality/ structure/definitions of organic data bases will clearly be dependent on the decisions taken for the conventional sector.

A very specific approach (mainly because of its special legal framework) to improve the availability and harmonisation of DCPS on organic farming could be observed in Demark, where **a common operator identification number permits administrative and statistical data to be linked**. The basis for this is that all operators with a turnover of more than 50,000 DKK (~ 6.700 €) are registered in the Danish central VAT register. The VAT number is used as common operator identification number in all reporting systems required by the various public authorities. In the survey on turnover of organic food products in retail shops the common identification system, COICOP, was introduced to link the administrative and statistical data on the turnover in organic food products and the household budget survey.

4.3.1 Special recommendations

One possible solution for a substantial improvement on the European level suggested in the EISfOM conference held in Berlin in 2004 and in later expert discussions was **to obtain relevant retailer/consumer data directly from commercial providers working to a common European standard,** aiming to ensure coverage of all relevant variables covered and generation of time series data.

On the European level, this recommendation recognises the role which commercial market research companies are already playing in obtaining data about the organic sector. The use of commercial providers might also provide a mechanism for improving the availability of price data at retail level. But current activities are limited in some cases by poor data quality and by the high costs of results which prevent wider distribution and use of information – only large companies can afford to buy the data collected. Eurostat has already asked Member States to start collecting more consumer data from 2005 and is in the process of defining the scope of this work. Although Eurostat would be unlikely to commission work from commercial organisations directly, it would be open to national authorities to do so, and Eurostat is currently reviewing the data collected by these organisations to identify options for future work. It is, however, considered important that organic data should be reported in same way as conventional farming data in order to guarantee quality. The main advantage in cooperating with commercial market research companies is that they already have well established procedures for collecting retailer and consumer data through the use of retail/consumer panels and barcode databases. Subject to the appropriate contractual arrangements, market research companies would permit data to be placed in the public domain, although if such firms can also resell some of the data this might reduce the requirement for public funds. In such cases, there may need to be some agreement on delays in publication to permit commercial value to be extracted.

If an international company like GfK were contracted by Eurostat to collect and compile organic consumption data for the Member States this would be a great opportunity to obtain standardised data about organic consumption volume and value all over Europe. A Eurostat initiative to calculate the cost benefit ratio of an in-house data collection system versus data purchase from commercial providers, like GfK, should soon lead to a decision about how harmonised collection of organic consumption data could be achieved.

Another (although quite specific) approach on the national level can be found in Denmark. The case study shows that it is possible to get a reasonable estimate of the turnover of organic food products by involving a few commercial respondents (the supermarket chains and the wholesalers) rather than commercial data providers. This is possible because the reporting of statistical data in Denmark is mandatory when requested by Statistics Denmark. A similar approach involving payment of the respondents may be relevant in other EU member states with a more or less similar market structure. However, it was pointed out that a market survey is needed to get more information on the marketing channels for organic food products in the various EU countries. This would be necessary to define how the data on organic food products turnover in the retail shops can be collected in the simplest and cheapest way for respondents as well as for data processors whilst at the same time guaranteeing high data quality. It was recommended that the COICOP classification

system could be used for this purpose because it covers the main products and is already harmonised in Europe.

Whereas the recommendation above found a high level of agreement among some stakeholders and experts **the integration organic food consumption issues into household budget or food expenditure surveys** was viewed more critically. From the German case study experiences, since household budget survey data are made available about two years after they are collected, the data are of little relevance to market participants / stakeholders for short term and strategic decisions. Therefore, the integration of organic market data seems to be of little value for stakeholders needing data for short and medium term decisions.

4.4 Import/Export and Trade level

It has proved quite difficult on the import/export and trade level to identify pilot applications because across Europe there were very few examples to investigate. Therefore the analysis concentrated mainly on the UK approach and a DCPS on foreign trade in Denmark, which has a very different legal framework concerning statistics from other European countries. In this respect the following results and recommendations apply to specific circumstances.

A prerequisite for establishing **common protocols for data processing and exchange** in Denmark was to match the information on enterprises involved in foreign trade against enterprises certified for organic trade using the common business enterprise number (CVR, which is also the VAT number). The use of internationally harmonised nomenclatures was seen as important so that statistics can be compared with those for conventional products or statistics on import/export of organic products from other EU countries. Within the British case study it was seen to be necessary to extend the scope to cover intra-European trade and exports to third countries, which would require a change of codes (NACE). This has been the subject of significant international discussion (Eurostat working group papers and EISfOM Berlin Seminar proceedings) with little progress possible. UK Customs and Excise have also decided that they are not willing to make changes to classification to achieve this.

To **facilitate statistical agency, external expert and stakeholder communication and involvement in data collection and processing** it was proposed that data quality should be improved and the response burden reduced by means of communication with stakeholders on the possibilities for marking organic products in the accounting systems, by developing the questionnaires and by using electronic tools from Statistics Denmark in co-operation with the enterprises. To facilitate the recommendation above via the **development of specific IT solutions** in Denmark the questionnaire, which was sent out to the enterprises certified for trade in organic products, was provided in the form of an Excel spreadsheet on a CD as well as in a paper version. The questionnaire was sent out with an introductory letter and guidelines on how to fill it in, a country code list and a copy of the Combined Nomenclature (CN-8). It turned out that a little more than 50% of the respondents used the paper version to report, while about 25% used the electronic version of the Excel spreadsheet and reported the data via e-mail. If the survey were carried out regularly then electronic reporting would probably be used even more often. To

facilitate easy access to and timely and rapid dissemination of available data (especially for on line access to data) it was proposed that they should be published t on the STATBANK webpage, which may be accessed free of charge. However, a delay of ten or eleven months in publication of the annual statistics on foreign trade in organic products was seen as realistic.

A request for the **extension of the existing data collection on intra- and extra-European trade to differentiate between organic and conventional data** was viewed with some scepticism. Statistics Denmark pointed out that CN nomenclature is already far too detailed and if it were extended to cover organic products, nearly 2000 new CN codes would need to be added. The proposal therefore was to record organic and conventional products separately in the accountancy systems of the relatively few enterprises involved in foreign trade in organic products.

The question was asked whether the **integration of data from third country import approvals and certification body data in trade statistics** would be a reasonable solution. The case study showed that the amounts of organic products imported from third countries was very low compared to intra-European trade and this will probably be the same for most other Member States. It is therefore recommended initially that efforts concentrate on how to collect and report reliable statistical information on intra-European trade.

4.5 Supply chain level

The analysis of the recommendations on the supply chain level is mainly derived from the results of the two Austrian case studies. Therefore, the following results have to be understood more as examples of best practice than as general recommendations for the implementation of a harmonised DCPS on the European level. Nevertheless, the results indicate some major areas and tasks to address in the future when considering development across Europe.

Concerning **the establishment of common protocols for data processing and exchange,** the DCPS investigated operate some technical tools for the facilitation of data collection and sharing among various market partners and inspection/ certification bodies which ensure data quality and timeliness. A particular feature of BSM is that certification data and data on quality management provide the basis for statistical analysis. In e-cert, the DCPS is focused more on the facilitation of data collection and processing using digital recording and the possibilities for cooperation between inspection/certification bodies. Both case studies underline the view of the experts interviewed that a common definition of organic farming in Europe is required which should lead to a common definition of nomenclatures and standards. Secondly the case studies show that since the participation of various market actors in such DCPS is more or less voluntary, the statistical data may be incomplete. In this regard it was seen to be necessary to establish a system of incentives and/or legal requirements to facilitate participation, and the involvement of certification bodies in this case seem to be quite critical.

In both DCPS investigated **the development of IT solutions, especially the use of on line forms for data collection** proved quite successful. The results of the case studies show that from a technical viewpoint the use of on line forms for data collection has developed considerably in recent years, so in this context no serious

problems are expected. One of the most critical issues is the increasing volume of data which may cause technical problems of storage or processing. It was also agreed that the implementation of IT solutions by market partners along the supply chain (especially certification bodies and processors), after the obligatory start up phase, shows positive effects by reducing the administrative workload through automatic documentation. In line with some experts opinion at present the IT solutions are focused on specific levels or problems (e.g. TQM, certification/ inspection) and therefore there is no experience of international solutions. Specific experience in the case of expanded use of the DCPS is still missing. It also seemed obvious that resources are a key issue in enabling certification bodies or (to some extent) relatively small market partners to modify their existing systems. Another important point mentioned was the handling of access to the DCPS (who is authorised to use which data) as well as data confidentiality. In this case a strict legal framework for the use of data is required.

In terms of **a compulsory (legal) requirement, with appropriate financial compensation, for certification bodies to supply specific administrative (2092/91) data,** the case studies showed that the proposal to introduce such a requirement was not well received, mainly from owners, users and processors of data. Certification and inspection bodies fear that they will be forced to carry the financial burden of additional and/or harmonised data collection on their own, and the cost in the end would be imposed on the producers. Additionally in the context of a common definition of variables it emerged that inspection/certification bodies use quite different systems for product classification and nomenclatures and therefore data collection (even in regard to EU no. 2092/91) is not harmonised, although technically and on a voluntary basis this problem could be solved in both DCPS investigated. Thirdly, the responsibility of member states for data collection and reporting has to be clarified so that it is clear which organisation(s) are authorised to access the data and how these data can be used for statistical purposes or for publication.

Concerning **facilitation of easy access to and timely and rapid dissemination of available data (especially on line access to data)** the DCPS tested demonstrate clear approaches. Two main problems appeared during the case studies. On one hand, the handling of authorisation and access rights for potential users of the DCPS seems to be very complicated. In the case of extended use of the DCPS tested it must be made clear which market actor or which (public) authority has access rights and to what extent. This seems to be necessary to ensure data security for the different market partners. On the other hand it has to be clarified how the data gathered can or should be made available to a broader public.

With regard to the recommendation to **develop a legal requirement for institutions which are already obliged to collect data (e.g. slaughter houses) to distinguish between conventional and organic products** the results of the case study signal little support. Interviewees, in line with the expert opinion in D3, stated that this would mean too much extra bureaucratic and administrative burden on businesses only partly engaged in organic markets. If at all, data collection should be done during the inspection process, although some respondents also had some objections in the context of data security.

A further recommendation to **integrate data from third country import approvals and certification body data in trade statistics** was also viewed sceptically.

Although data on third country imports (and partly also intra-European trade) are integrated into the DCPS investigated, the applicability of this data for statistical purposes is quite unclear. Besides legal impediments and lack of clarity in data processing, the main obstacle in this case seems to be data security, which reduces the possibility of publication. For this problem interviewees were not able to suggest clear solutions.

4.6 Price level

On the price level two DCPS were investigated, i.e. Prezzibio in Italy and one ZMP initiative in Germany.

Regarding **the establishment of common protocols for data processing and exchange to ensure harmonised quality management and improved timeliness** on the price level, case study results show a strong interest from the partners in data harmonisation issues; however, much work needs to be done to reach the goals. The main problems identified concern data collection at the production and distribution levels using data provider lists instead of common protocols. This complicates defining the price of some minor product categories. In the German case study it was recommended that the classification list of the German price collecting system could serve as a basis for finding a reference system for producer, wholesaler, retailer and consumer prices. The harmonisation process for this proposal is still ongoing between Italy and Germany. However, the data provided are harmonised with respect to other projects, such as Biomonitor in which a cooperative rapport has been established. To facilitate data collection in Italy, software used by the project provides for the use of on line data collection. However, so far it has seldom been used to ensure the quality of the data.

In terms of **establishing mechanisms to facilitate statistical agency, external expert and stakeholder communication and involvement in data collection,** both case studies show fairly successful approaches. Project partners are particularly active in establishing cooperative relationships and communication with other organisations and experts. As mentioned above, the project partners maintain both formal and informal relationships with other project agencies. In Italy, for example, Biomonitor is an EU-funded project that collects data on organic product prices for various countries including France, Portugal, Spain, Germany, Belgium and Switzerland. Additionally the Ministry of Agriculture has just approved a project to implement an Economic National Observatory on Organic Agriculture in which various statistics and scientific organisations will participate. The Prezzibio project could play a fundamental role in the national investigation on prices as an instrument for data harmonisation at the national level.

One of the main strengths of the DCPS in Italy is the easy access to data through the publication of price lists on the website. **Easy access and timely and rapid dissemination of available data** is seen a very important issue to achieve the principal aim of the project, i.e. to guarantee more price transparency in market transactions among different market actors and between market actors and consumers. But experience shows that unlimited access to data leads to problems when trying to persuade data providers (farmers, wholesalers, retailers, processors) to participate. In the German case, for example, the most important market actors are only willing to provide the necessary price data if they see an advantage for

themselves, which means mainly being integrated into a closed data user group which is not accessible to the public. If data are publicly available, it is most likely that data providers will have to be paid for delivering the data.

One of the main problems for Prezzibio put forward by the interviewees has been the project's financial instability. It was claimed that **sufficient resources, based on a coherent justification of needs and benefits** should be available for the implementation of proposals. In the case of Prezzibio, which is funded on an annual basis by the Chamber of Commerce if the finance is available, the lack of financial reliability inevitably affects the goals of accuracy and timeliness of the project.

5 Summary, conclusions and recommendations

The objective of WP5 was to co-ordinate pilot studies in key European countries (UK, DE, AT, CH, DK, IT, NL, PL) and at the international level (Eurostat, FAO) as well as to collate and evaluate the pilot study results. The aim of this report is to present the main findings from the pilot applications conducted in eight European countries involved. Alongside the empirical research, the report summarises the previous results of the EISfOM project, integrating the D2 report (Wolfert *et al*. 2004), the proceedings of the first European seminar in Berlin (Recke *et al*. 2004) and the conclusions and recommendations of D3 (Recke *et al* 2004). Further it is aims to provide a detailed view of the possibilities for standardising data collection, approaches to overcoming weaknesses in data collection (as identified in WP4) and especially to identify improved methods of generating reliable data and/or overcoming barriers and problems in relation to the implementation of such improvements. In addition, this report sets out to confirm or revise the recommendations put forward in D3, integrating the consolidated findings and outcomes of the investigated pilot applications of DCPS.

The main findings of this report can be summarised as follows:

1. Farm level (production):

National and international production level case studies results 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 a closer **involvement of certification bodies** in the data collection process. Although in general this approach seems to be quite promising, pilot applications indicate some specific barriers to its implementation. It appeared that in some countries certification bodies fear an increase in the volume of data which would mean an additional workload and higher costs without adequate compensation. The establishment of a legal obligation for certification bodies to deliver statistical information was resisted in some countries mainly because of the uncertainty about which data should be delivered and how **additional costs (especially software and hardware costs)** for data collection would be covered. The case study results propose individual solutions for funding and data volume, which is a constraint for international harmonisation of DCPS on the production level. Without a legal requirement for certification bodies to deliver data (as in the Netherlands) the main problem is how to motivate certification bodies to deliver data.

A major problem area is the **lack 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 or conventional. These discrepancies in nomenclature can explain the substantial differences between administrative data and FSS data in some countries. Hand in hand with the discussion on 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 on line registration of data and data storage), the question of who will cover the **additional**

costs was raised several times. Other points identified were related to **data confidentiality** (data access rights) and **publication issues**.

Although on the European level, production level data are already provided annually under 2091/929 and every two years by the Farm Structure Survey, a major problem was the **lack of a standardised nomenclature and definitions for correct product identification**. 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 **low rate of representative data of organic holdings** among the units sampled in each individual region. Further it is still not possible to identify whether the whole farm or just parts of the farm are managed organically.

Recommendations:

One of the issues raised most often in connection with improving data availability and quality 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 it has proved difficult in some countries 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, especially the use of on line forms for data collection should be developed. 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 the investments will reduce the administrative burden and could provide the incentive for certification bodies to access a sophisticated IT framework for easier data collection. Discussions with certifiers to explore the potential for IT solutions have already taken place several countries and it seems to be necessary to focus on this in future discussions with certification bodies.

In supporting certification bodies in data collection and to improve data quality, the **development of common guidelines for completion of the Eurostat/DG Agri 2092/91 returns** is recommended. The current absence of such guidelines is seen a significant factor contributing to poor returns and poor data quality in some countries. The development of guidelines should be conducted via a participatory approach to ensure that they are clear and appropriate for those organisations. The guidelines should define the data required as well as the minimum requirements that certification bodies are expected to meet in terms of data collection and use of Eurostat nomenclatures.

It is also recommended that the **Farm Structure Survey should be harmonised with the administrative (2092/91) data collection and reporting** as way 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 statistical agency, external expert and stakeholder communication and 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 (Income)

Although the Farm Accountancy Data Network (FADN) is one of the key instruments for evaluating the income of agricultural holdings at present, 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 representativeness** of organic farms could be greatly improved. From the pilot applications it also emerged that some statistical offices are not in favour of data collection specifically on organic farming via FADN because it 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 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 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 national and international level, the establishment of special working groups under the leadership of DG Agri and/or EUROSTAT would offer 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 in its infancy. The involvement of private research companies means that the **identification of organic products on the national level** shows

quite 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 the establishment of 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 with key stakeholders be established** for the development of 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 strong involvement of commercial market research institutes in data collection and processing, especially on the retailer/consumer level, the costs for data users must remain affordable. Therefore it is proposed that **cooperative funding by public stakeholders (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 as recommended in D3 was viewed as of little relevance.

4. Trade level

On the trade level (including import/export) it has proved difficult to find adequate pilot applications since there were there were few examples to investigate. One of the main drawbacks of 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 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 **subject of significant international discussion** (e.g. within Eurostat, at the EISfOM Seminar in Brussels in October). 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, development of the questionnaires and by using electronic tools (as described in the Danish case study).

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 within separately in 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 selling directly to cooperatives and farmers associations are often unable to define the product price

Recommendations:

There partners were keen to **develop common protocols for data collection and processing** on 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 taken as examples of best practice rather than general recommendations for the implementation of a harmonised DCPS on European level. The main problem identified is the **lack of a DCPS on 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 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.**

Literature:

CEC (2004) *European Action Plan for Organic Food and Farming.* Communication from the Commission to the Council and the European Parliament. COM (2004) 415 final, Commission of the European Communities, Brussels.

EUROSTAT (2003) Handbook "*How to make a quality report*". Doc.Eurostat/A4-/Quality/03/Handbook, Eurostat Working Group 'Assessment of quality in statistics' 2-3 October. Eurostat. Luxembourg.

FIRTH, C., GREEN, N. & HITCHINGS, R. (2005) The UK Organic Vegetable Market. Coventry, HDRA The Organic Organisation.

JACKSON, A. J. & LAMPKIN, N. H. (2005) Organic Farm Incomes in England and Wales 2002/03.Institute of Rural Sciences, University of Wales, Aberystwyth.

LARSEN, Poul Henning (2003) "Organic Statistics, Needs Assessment and Possibilities for an enlarged Coverage of the Organic Sector", Phase 1 and 2, Statistics Denmark

LARSEN, Poul Henning (2004) "*Survey on Foreign Trade in Organic Products 2003*", Statistics Denmark in Statistiske Efterretninger 2004: 25 of November 29.

LARSEN, Poul Henning (2004) "Survey *on turnover of organic foods in retail shops in 2003*", Statistics Denmark in Statistiske Efterretninger 2004:19 of September 14, 2004.

RECKE, G., Hamm, U., Lampkin, N., Zanoli, R., Vitulano, S. and Olmos, S. (eds.) (2004) *Report on proposals for the development, harmonisation and quality assurance of organic data collection and processing systems (DCPS). Deliverable D3* of the Concerted Action Project "European Information System for Organic Markets" funded by the European Commission.

RECKE, G., Willer, H., Lampkin, N. and Vaughan, A. (eds.) (2004). *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, 26-27 April, 2004. Research Institute of Organic Agriculture (FiBL), Frick, Switzerland.

Soil Association (2004): Organic Food and Farming Report 2004. Bristol, Soil Association.

WOLFERT, S., Kramer, K. J., Richter, T., Hempfling, G., Lux. S. and Recke, G. (2004). *Data collection and processing systems for the conventional markets and data collection and processing for organic markets.* Deliverable D2 of the Concerted Action Project "European Information System for Organic Markets" funded by the European Commission. www.eisfom.org

APPENDICES

APPENDIX 1: National working papers

APPENDIX 2: Case study guidelines