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Brief description of the Deliverable

Report on the experience of carrying out the case studies

Target audience(s)

Organic market data collectors (within the project and out-with the project)

Publishable Summary

Procedures and methods for collection and publication of organic market data across Europe vary widely, with a growing number of countries publishing market estimates; but several problems with data collection are reported. To overcome some of these issues, and to test approaches in practical situations, case studies were carried out in five different EU countries and one EU/non-EU region. Comparative case studies are well-established as an action-oriented approach that, whilst not aiming for statistical generalisation, considers and resonates with the experience of stakeholders.

The case studies in the Organic Data Network Project had two main aims:

- To facilitate the exchange of experience, knowledge and methods of organic market data collection, firstly between the organisations publishing the reports, and secondly between these organisations and researchers of the OrganicDataNetwork.
- To publish improved (Germany, France, Italy, Czech Republic and UK) or new (MOAN - Mediterranean Organic Agriculture Network, which includes several EU candidate and potential candidate countries) market reports (see Deliverable 6.1 to 6.6 of this project).

This report summarises the experience in relation to lessons learned from the case studies; which are relevant to other stakeholders involved with, or planning to set up, data collection of organic market data. The report covers categories such as primary production (e.g. crop areas, livestock numbers, yields and production values and volumes), domestic trade/retail (including combining different data sources for the various sales channels), farm level and retail prices and international trade data and presents some conclusions across the different data categories. The common case study protocol included a status quo analysis of data collection in 2011/12 (summarised in Appendix B) which led to country-specific work programmes for improving data quality through comprehensive data checking, and limited new data collection (within the available budget; see Appendix C for details).

Data category	Chapter	UK	DE	FR	CZ	IT	MOAN
Production data	4	✓		✓	✓	✓	✓
Domestic trade/retail	5	✓	✓	✓		✓	
Farm-level and retail prices	6 & 7		✓		✓		
International trade	8		✓	✓	✓	✓	✓

The experience showed that collaboration among researchers and national bodies who publish market data has resulted in the implementation of additional or improved data collection methods and quality checks. The following main lessons were learned:

Production data

- Private bodies may develop their own data categories; dialogue is often required to achieve harmonisation with Eurostat categories.
- FADN data can provide additional information about production (e.g. yield, farm-level prices), especially if sample sizes are sufficiently large to give good coverage of organic farms.
- Producer surveys can also supplement production data, targeting specific data gaps and providing more up-to-date insights; but survey fatigue of organic farmers is a potential issue.
- Estimating yields to calculate volume and value of production should make use of a combination of different approaches such as scientific studies, previous projects, expert estimates and also specific studies/surveys which give detailed data but can be time consuming and costly.

Domestic retail sales data

- No data source covers all market channels through which organic products are regularly sold. A combination of different sources and approaches is necessary to develop an estimate of the value of the total organic market.
- Sales through multiple retailers are collected through panel data (household or retail); users of such data should be aware of the likely coverage and advantages and limitations of the methods used.
- Product classification systems are not harmonised (market research companies use their own in-house systems) which hampers cross checking and comparisons between different sources, over time and between countries.
- Different approaches exist for estimating sales through specialist organic and artisan shops (e.g. butchers and bakers), direct sales and catering; for example through surveys among members of umbrella organisations (e.g. of farmers' markets and farm shops), collaboration with trade/sector bodies or specialist panels for organic shops.

Farm level and retail price data

- When comparing different methods for farm-level price data collection, it is necessary to consider where in the supply chain the data are collected (e.g. farm-gate, including or not transport/delivery costs etc.), differences in publication dates and frequencies, differences in product categorisation, and VAT inclusion (and rate) or exclusion.
- If retail price data are collected by market research companies, access to non-up-to-date data may be possible at lower costs or free of charge. These data can be very useful in providing information on price trends and market development.
- When comparing retail price data (e.g. organic with conventional), it is necessary to compare products of similar quality and packaging.

International trade data (import/export)

- This category covers both imports from within EU and from non-EU countries, which represents an important part of domestically consumed organic products in most Member States.
- Special customs provisions are made for import of organic products from outside the EU as part of the organic import regime. This could result in some data becoming available if either a common code would be used in the Single Administrative Document (SAD) (e.g. national code or the C644 code (Certificate of organic inspection)); Box 44 is already used for this purpose in some countries.
- Working with import authorisations alone has a weakness in accurately estimating the volume of imports. Most companies will apply for higher volumes in import authorisation than are effectively imported.
- There is no special requirement to monitor intra-EU trade as part of the organic control regime, so it is most difficult to obtain such data. It is likely that intra-EU trade forms the majority of imports and exports for some countries and some products, so this remains a big data gap.

- Other collection methods to gather export and intra EU trade data include dedicated surveys of exporters and other operators.
- The full picture of all import/export into one country can only be obtained if all three types of trade (with countries on the compliance list, with countries that are not on the compliance list and intra EU trade) are considered. Some work carried out as part of the case studies suggests that the best and easiest way to collect organic international trade data would be differentiating between organic and conventional products in national trade statistics as is done in Denmark.

General conclusions across all data categories

- Data are often collected by many different organisations, including commercial bodies, governments and researchers, but organic data collection is not necessarily an explicit task for all of them.
- Close collaboration with specific government departments that are not directly involved with organic farming (e.g. customs authorities, national statistics authorities) has improved the availability of data in several cases. Taking part in the case studies has also raised awareness of the need to identify and address problems and the need to increase efforts in organic market data collection.
- Sharing of the organic data between organisations can prevent over-sampling of organic producers and operators, but
 - there is a tension between market transparency and the need to protect commercially sensitive data;
 - sharing data only works if common classification systems are used.
- Efficiently collating data from different sources also requires harmonisation of classifications and methods, but different data types require different solutions to improve the data collection.

Dialogue and discussion are key in initiating organic data collection and in learning to incorporate new approaches/methods and data checks as the systems develop. The creation of a coherent and durable national organic market data platform is likely to improve data collection and also the storage of data so that historical trends can be analysed. National networks and/or regular annual meetings between different data bodies along with European networks such as the OrganicDataNetwork provide a forum for data collectors to share experiences, to learn from each other and to work together. Establishing and supporting such platforms and networks on a national and European level will improve organic market data collection, and availability and quality of such data for organic operators and policy makers in Europe.

Potential Stakeholder impact(s)

Identifying data collection approaches which may be helpful for improving organic market data and national market reports; and forming an international network of data collectors as a platform for knowledge and experience exchange.

Interactions with other WPs Deliverables / joint outputs

WP no.	Relevant tasks	Partner(s) involved	Context of interaction
WP3 and WP2	Survey and analysis of survey data	P3 (ORC) and P4 (University of Kassel)	Building on the information obtained from the survey and its analysis.
WP4	Collection of data from case study countries	P2 (FiBL)	Building on the data collection.
WP5	Models for consistency checks and methods of data improvement	P4 (University of Kassel)	Testing of methods for quality checks and data improvement.
WP6	Publication of improved market reports	P1 (UPM), P2 (FiBL), P3 (ORC), P4 (UKS), P5 (CUKS), P6 (IAMB), P7 (ABIO), P8 (AMI), P14 (IMO TR), P15 (SA)	This report collates the experiences of those producing the reports which form deliverables 6.1-6.6 of the project.
WP7	Code of practice and Manual	P1 (UPM)	The results from WP6 will feed into the Code of Practice and Manual



Co-funded by
the European Union

Data network for better European organic market information

Collaborative Project

Collaborative Project targeted to a special group (such as SMEs)

SEVENTH FRAMEWORK PROGRAMME

FP7-KBBE.2011.1.4-05

Data network for better European organic market information

D6.7 Report on the experience of conducting the case studies

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Table of Acronyms

Acronym	Description
AEA	Aegean Exporters' Association (Turkey)
Agence Bio	French agency for the development of organic farming (France)
AIAB	The Italian Association for Organic Agriculture
AMI	Agricultural Market Information company (Germany)
APCA	Assemblée permanente des chambres d'agriculture, Permanent assembly of the chambers of agriculture (France)
AssoBio	Associazione nazionale delle imprese di trasformazione e distribuzione di prodotti biologici e naturali (Italy)
BLE	Federal Office for Agriculture and Food (Germany)
BMEL	Ministry of Food and Agriculture (Germany)
BOLW	German umbrella association for the organic sector
CB	Control body
CNIEL	Centre National Interprofessionel de l'economie latiere, sector organisation for milk (France)
CPA	Classification of products by activity, code for identifying products.
CSD	Certified sales data (UK)
CULS	Czech University of Life Sciences (Czech Republic)
CZ	Czech Republic
DE	Germany
Defra	Department for environment, food and rural affairs (UK)
EAs	Exporters' Associations (Turkey)
EAN	European Article Number / International Article Number or bar code
EEA	European Economic Area
EPOS	Electronic point of sale
ETO	Ekolojik Tarım Organizasyonu, Organic Trade Organisation (Turkey)
EU	European Union
Eurostat	Statistical office of the EU
FADN	Farm Accountancy Data Network
FAM	FranceAgriMer, national organisation for agricultural and marine products (France)
FARMA	Farm Retail and Markets Association (UK)
FBS	Farm Business Survey (UK)
FNAB	Fédération Nationale d'Agriculture Biologique, National federation of organic agriculture (France)
FR	France
GfK	Association for Consumer Research (Gesellschaft für Konsumforschung)
GIZ	Gesellschaft für Internationale Zusammenarbeit GmbH (Germany)
GM	Green marketing (Czech Republic)
IAEI	Institute of agricultural economics and information (Czech Republic)
IAMB	Istituto Agronomico Mediterraneo di Bari (Italy)
Interbev	Interprofession betail et viande, the sector organisation for livestock and meat (France)

Interfel	Interprofession des fruits et légumes frais, Sector association for the fresh fruit and vegetable industry (France)
ISMEA	Istituto di servizi per il mercato agricolo alimentare, the institute for study, research and information on agricultural and agri-food market (Italy)
ISTAT	The Italian National Institute of Statistics (Italy)
IT	Italy
MA	Ministry of Agriculture (Czech Republic)
MAEP	Ministry of Agriculture and Environmental Protection (Serbia)
ME	Maximum entropy
Med	Mediterranean
MEG	Market information for Eggs and Poultry (Germany)
MFAL	Ministry of Food, Agriculture and Livestock (Turkey)
MIPAAF	Ministero per le Politiche Agricole, Alimentari e Forestali, Ministry of Agriculture, Food and Forestry (Italy)
MOA	Ministry of Agriculture
MOAN	Mediterranean Organic Agriculture Network
N/A	Not applicable
NACE	Is the “statistical classification of economic activities in the European Community” which imposes the use of the classification uniformly within all the Member States.
NUTS	Nomenclature of territorial units for statistics
OF&G	Organic Farmers and Growers (UK)
OFIS	Organic Farming Information System (Turkey)
OMSCo	The Organic Milk Suppliers Co-operative (UK)
ORC	The Organic Research Centre Elm Farm(UK)
ORSA	Organic crop statistics Sampling survey (Italy)
PRODCOM	PRODUCTION COMMUNAUTAIRE. Prodcum uses the product codes specified on the Prodcum List, which contains about 3900 different types of manufactured products.
RICA	Farm Accountancy Data Network (Italy)
RNM	Réseau des nouvelles des marchés, Network market news (France)
RPA	Rural Payments Agency (UK)
SACL	Soil Association Certification Ltd (UK)
SAD	Single administrative document
SINAB	Sistema d'informazione Nazionale sull'Agricoltura Biologica, national information system on organic farming (Italy)
SPS	Supply balance sheets
SRUC	Scotland's Rural College (UK), previously known as SAC
Synabio	Le syndicat national des entreprises bio, the national organisation for organic businesses
Synalaf	Syndicat national des labels avicoles de France, the national organisation for aviculture (France)
TARIC	Customs data classification system
UK	United Kingdom
UPM	Università Politecnica delle Marche (Italy)
VAT	Value added tax
ZMP	Central market and price report office (Germany) – no longer in existence.

1 Introduction

Procedures and methods for the collection and publication of organic market data across Europe vary widely as previous studies have found (Hamm and Gronefeld, 2004; Rippin *et al.*, 2006), and the earlier stages of the OrganicDataNetwork project have confirmed (Gerrard *et al.*, 2012; Feldmann and Hamm, 2013). A number of countries publish national market estimates or reports, but the coverage in terms of what data are collected and/or published differs from country to country. In general, available data regarding the organic market are not nearly as detailed and reliable as conventional (non-organic) agricultural and food industry statistics, hence leading to a lack of transparency in the organic market.

A number of specific problems with organic market data have been reported for a variety of countries through stakeholder consultation (via online surveys and in a workshop) and other tasks within the project (Home *et al.*, 2013a; Home *et al.*, 2013b; Willer and Schaack, 2013; Gerrard *et al.*, 2012). These are summarised in Table 1.

Table 1 - Problems with organic market data

Insufficient data collection	Limited data on prices Lack of time series data Lack of data on import/export Lack of data on sales through farm shops, farmers' markets, and the catering sector
Poor data quality	Small sample sizes Data collection based on guesswork Lack of distinction between organic and conventional sales Self-selection of samples Quality checking procedures poor or missing
Lack of harmonisation and comparability	Basic parameters are not well-defined Products are often given different categories Lack of transparency as to the collection or analysis method used
Insufficient analysis and untimely dissemination	Data analysis and cross-checking of data are sometimes not carried out Lack of promptness of data distribution and insufficient access to data Sometimes high costs for access to data Sometimes data collected are not published
Lack of funding	The available budget for appropriate market data collection, quality checks, analysis and publication varies significantly in the different EU countries.

Source: Home *et al.*, (2013a, b, c); Willer and Schaack (2013); Gerrard *et al.*, (2012)

To overcome some of these issues and to test approaches in practical situations, case studies were carried out in five different EU countries and one EU/non-EU region. The case studies aimed to facilitate networking, learning and collaboration among national bodies; and to facilitate the implementation and improvement of data collection and quality checks, ultimately leading to improved market reports. Case studies took place in four countries with well-developed organic markets (UK, Germany, Italy, and France), one country with a less developed organic market (Czech Republic) and the Mediterranean Region (MOAN). In all of the selected countries and regions, some initiatives to regularly collect organic market data already exist and the organisations publishing these reports were directly involved in the case studies.

The specific aims and work plan for the improvement of organic data collection in each case study were based on an analysis of existing data collection in 2011/12 (see Appendix B).

The case studies included:

- production data (all data related to agricultural production, e.g. crop areas, livestock numbers, yields and production values and volumes),
- domestic trade/retail data,
- price data (farm level and retails), and
- international trade data (see also Table 2-1 below).

Data collected in the individual case studies are published in a first market report (MOAN) or improved market report (in the other five cases) (Organic Data Network Deliverable 6.1 to 6.6) and in some cases also in additional national publications. Further, the teams were asked to report on the experience gained in carrying out the additionally identified tasks for the case study. This report collates and compares the experiences from all countries in terms of what improvements in organic data collection were attempted and achieved, how data has been collected and at what costs.

Chapter 2 of the main report introduces the case study approach and the work plan for each case. The following Chapters (3 to 9) describe the experiences in carrying out case studies: a) regarding initiating data collection where none existed before, b) in relation to different data categories, c) regarding the use of data consistency checking, and d) where possible, estimating the costs incurred for additional data collection (time and direct costs). Each chapter concludes with a short summary of lessons learned; the general conclusions are presented in Chapter 10.

More detailed material has been placed in four appendices to the report. In Appendix A, background information is provided on data collection for each data category based on scientific literature and reports of previous research projects. Appendix B contains reports on the status of data collection in each of the six case study countries/regions prior to the start of the case studies. Appendix C contains the full report on their experience of carrying out the case study for each country/region. Appendix D contains results of a small study by FiBL and AMI on data collection systems for import data in Europe, which was carried out as part of the French case study.

2 Case study approach

The procedures for organic market data collection vary widely across Europe, depending on size of the market, types of organisations involved and available funds for data collection, collation and publication. They are more advanced in countries with well-developed organic markets, where national market estimates or reports are regularly published, and less organised in countries with smaller domestic organic markets, frequently without any published reports on market development.

In order to improve the availability and quality of published market reports, case studies have been shown to be a useful approach in various previous research projects which have examined organic market data. Specifically, the EISfOM project conducted pilot studies in eight European countries (Austria, Switzerland, Germany, Denmark, Italy, Netherlands, Poland and UK) and at the international level (Eurostat). In that project, pilot studies were used for testing new and/or improved data collection and processing systems (DCPS) for organic markets on various levels as reported by Gleirscher *et al.* (2005). Generally, conducting case studies is a well-established method for carrying out this type of research with comparison across countries or regions adding an extra level of insight but also complexity (Midmore *et al.* 2004; Gleirscher 2005; Michelsen *et al.* 2001; Midmore *et al.* 2006). Yin (1994) suggests that, although case studies do not attempt statistical generalisation, the resulting analytic generalisation can illustrate, represent, or generalise a theory. Stake (1995) describes the generalisability of case studies as ‘naturalistic’, resonating with the experience of actors themselves. Case study findings can thus place stakeholders at the centre of developing action-oriented insights for analysis and use.

In this project, the six case studies aimed at improving market data collection and reporting. First, a common case study protocol was developed to facilitate the exchange across the countries and the current status quo of data collection in each country/region was established (see Appendix B). In a second step, a country-specific work programme for improving data quality through comprehensive data checking and limited new data collection (within the available budget) was developed (see Appendix C).

The studies took place in the UK, Germany, Italy, France, Czech Republic and in member countries of MOAN (here reported for Turkey, Lebanon and Serbia, Albania and Tunisia¹). The chosen countries cover a range of different stages of organic market development, allowing a comparison of different stages of data collection, problems and needs in the various stages. The work within the case study teams involved close collaboration between researchers and public and private organisations involved in publishing the market reports (see Table 2 below). Discussion between all the teams at project meetings allowed for sharing of experiences across countries.

¹ In the case of Morocco, formal institutional agreements authorising CIHEAM Bari to publish some data was reached late in late 2014. This led to the inclusion of an additional chapter on Morocco in the MOAN Report 2014, but the full case study activities reported here could not be carried out.

The case study work programmes had the aim of improving specific areas (but not necessarily all areas identified as gaps) for each country. Table 2 below summarises the main topics covered by each of the case studies. It should be noted that the table only lists the areas where improvements were planned as part of the case studies. Additional data collection does take place and is published in these countries (see Appendix B and Table B 1) in almost all of the categories. More details of each case study can be found in Appendix C. The following chapters describe the experiences and lessons learned in carrying out the case studies. They are broken down by the different data categories.

Table 2 - Overview of the topics covered in each case study

	UK	DE	FR	CZ	IT	MOAN
Partner organisations*	ORC <i>Soil Association</i>	<i>AMI</i> UNKA	<i>Agence Bio</i> FIBL	CULS <i>(IAEI)</i>	UPM IAMB <i>(SINAB)</i>	<i>IAMB</i> MOAN UPM
Production data (see Chapter 4)	Improve timeliness of publication; English producer survey		Methodology for missing volume data collection	Use of FADN data to verify own data	Data harmonisation to provide volume and value estimate	Consolidate data collection
Domestic trade/retail (see Chapter 5)	Change of panel data source; Additional survey on non-multiples	Continuation of the organic market task force	Sector based approach for cross-checking sources		Comparison of datasets of domestic market	
Farm-level prices (see Chapter 6)		Compare with other countries			Cross check between ISMEA and Stock exchanges dataset	
Retail prices (see Chapter 7)				Analyse & publish the most recent, freely-available data		
International trade (see Chapter 8)		Experience from BOEL project on imports into Germany was considered	Work with Ministry and customs to obtain data; Use of surveys; International comparison of methods	Explore the use of customs data	Cross-checking of various data sources on imports	Combine sources to estimate export

*Organisations in italic were responsible for the publication of the market report;

Organisations in brackets were not full members of the Organic Data Network Project.

Source: Own data (see Appendix C; for data collection not covered by case studies see Appendix B).

3 Experiences with initiating data collection in countries where none existed previously

Initiating data collection where none existed previously is the important first step in establishing an organic market data reporting system. In the MOAN case study, some work was carried out in countries where a specific type of data collection (for example retail or international trade) was not currently carried out, but where members of MOAN identified a need for such data. In the UK, new data collection was attempted for some non-multiple retail sales outlets.

The experience from these case studies suggests that the first steps towards data collection and possible issues when starting the process are:

1. Identify the key organisations involved in that sector of the organic market that may hold data.
2. Start and maintain a dialogue between the key data holders, data collectors and other stakeholders who would want to use the data.
3. The collaboration with a trusted third party who will collect and collate data may help in reassuring potential data providers that their data will be kept confidential and will only be used in an amalgamated format.
4. Continued dialogue and discussion should help to grow response rates and to encourage others to participate.
5. Where data are provided:
 - a. Have a clear and detailed description of the data collection methods and analysis at the source and be clear about the subsequent collection and analysis for publication.
 - b. Assess coverage and representativeness of the sample obtained.
 - c. Carry out cross-checks.
6. Continue dialogue at national and international level.

A continual dialogue and discussion is seen as a vital feature in initiating data collection within a country. Across borders, networks of data collectors from a range of countries, like the OrganicDataNetwork, can support this by providing experience and advice from other countries and by providing a forum to discuss organic data collection. The MOAN case studies conducted in close collaboration with the national statistical authorities (e.g. Turkey) had the effect of raising awareness of organic data collection procedures in those institutions.



Stakeholder workshop with UK data collectors in July 2012, held at ORC, Newbury, UK.

4 Production data

Data on organic production are more commonly collected than data on retail, prices or international trade. Organic land areas and livestock numbers for EU countries are available from Eurostat. However, data on organic production volume (i.e. yields) and value (i.e. farm-level prices) and other aspects going beyond what is currently reported by Eurostat are much less likely to be collected (Gerrard et al., 2012).

Improvements to production data were foreseen in five case studies.

- In the UK, greater harmonisation of control body (CB) data categories with Eurostat classifications was attempted. In addition, a producer survey was carried out in England, similar to existing surveys in Scotland and Wales, which provided additional data on organic production and producers' future intentions.
- In the MOAN case study, harmonisation of CB data with Eurostat classifications was carried out.
- In the Czech Republic, the possibility of using FADN data to obtain additional information on production was investigated.
- In France and Italy, methods for estimating yields and so production volume were investigated. The Italian case study also investigated methods of estimating crop production value.

4.1 Harmonising data with Eurostat classifications

Control bodies (CBs) collect data on crop areas and livestock numbers during annual inspection visits. In most EU countries these data are collated and summarised at national level to complete the annual return to Eurostat. This may require harmonisation of CB data categories with Eurostat categories, which can be time consuming. In the UK case study, after a meeting between CBs and the Defra statistics team, the CBs agreed to provide Defra (Department for Environment, Food and Rural Affairs) with a mapping of their categories to the Eurostat categories. Harmonisation of production area and livestock number data with Eurostat was also attempted in some MOAN countries, including those that are not members of the EU. Again, this required existing data categories, including those using local crop or livestock names, to be translated and mapped to the Eurostat categories. The experience in these cases has shown that some private bodies involved in such data collection (e.g. CBs), may have developed their own data categories, specific to their needs. Continuous dialogue and mapping of these categories against those used by Eurostat can increase their awareness of existing classification systems, and reduce the time and effort required for data cleaning by the bodies collating the data for the Eurostat return.



Plums at the National Fruit Tree variety collection at Brogdale, UK and organic cattle visited in Estonia during the 5th project meeting in Tallinn, May 2014.

4.2 Using FADN data as a cross-check for production data

All EU member states collect farm income data as part of the FADN (Farm Accountancy Data Network). FADN surveys are carried out annually, on a sample of farms (European Commission, 2014), collecting information on:

- Physical and structural data, such as location, crop areas, livestock numbers, labour force, etc.
- Economic and financial data, such as the value of production of the different crops, stocks, sales and purchases, production costs, assets, liabilities, production quotas and subsidies, including those connected with the application of CAP measures.

The survey does not cover all the agricultural holdings in the Union, but only a sample of those which, due to their size, could be considered commercial (European Commission, 2014).

The organic sub-sample within the FADN can be used to obtain some useful data on organic production (e.g. farm-level prices, yields); either to fill data gaps or as a source for verification of data received from other sources. This was investigated as part of the Czech Republic case study. The usefulness of this approach depends on the number and distribution of organic farms in the FADN sample. If, as is the case in the Czech Republic, it is possible additionally to survey a larger number of organic producers as a supplementary part of the general FADN survey, then this can make it more representative of overall organic production in the particular country. The advantages and disadvantages of using FADN data according to the Czech experience are summarised in Table 3.

Table 3 - Advantages and disadvantages of using FADN to provide (additional) production data

Advantages	Disadvantages
The survey is carried out on an annual basis on a stable sample of farms.	Only covers “commercial” holdings, small-holdings and small farms may not be included (unlike in other surveys which might include these).
An independent dataset is provided, which can be used to verify data from other sources.	The organic sample can be small and not typical of the distribution of organic farm types.
Data is provided on organic and conventional farms, collected using the same methods and so allowing comparability.	The weighting factors (used to make the overall sample representative of total agriculture) may not result in a representative sample for organic farms (Hansen et al., 2009).
Economic data is available, which may otherwise be very difficult to collect due to its commercial sensitivity.	There may be differences in classification/methods which will need to be resolved before direct comparison.
	Data may not be as up-to-date as other data sources (collected retrospectively).

Source: Own data based on the Czech Republic case study

In the Czech Republic, the data are originally collected through the general FADN survey. Therefore, it is difficult to separate the costs of the FADN organic sector survey from the whole FADN survey. The total cost of FADN in the Czech Republic in 2012 was 17 368 314 CZK², or about 630 000 EUR. The cost per farm differs, based on its size and type of farm (production). On average, the cost per farm (conventional or organic) is about 8 000 CZK (EUR 290). For the 258 organic farms the average cost is higher (due to differences in farm size, structure and ownership) at about 460 EUR. In addition to these direct costs for data collection on organic farms, extra time was needed to process and analyse the data.

4.3 Using producer surveys

One way of filling some of the gaps in production data is to carry out an additional, direct survey of organic producers. This was investigated in the UK case study. Carrying out such a survey allows the questions to be tailored to the data gaps of a particular country, e.g. the producers can be asked about their sales volumes and values (and the proportion sold as organic or conventional), their plans for the future, yields generated, or other information which is of use to stakeholders and not collected by other methods.

One major challenge of this approach is to persuade organic producers to take part in a survey. The UK experience suggests that it is necessary to balance a desire to obtain as much data as possible, with an understanding of the needs of the producer; and to moderate the amount of information requested, so that the survey does not take up too much valuable time (Mohamed Shahin, 2013). It may also be necessary to consider the potential sensitivity of the data requested. For example, producers may not wish to give information about the prices they receive in case it affects their relationship with their customers or provides their competitors with a commercial advantage.

² 1 EUR = 27.5 CZK

The exact method of data collection requires further consideration. Surveys can be carried out online, by telephone, by e-mail, by post or even face-to-face. In most countries, face-to-face surveys are likely to be too time-consuming and expensive. The choice between online, e-mail, postal and telephone surveys may depend on whether the majority of farmers in the country have access to/use the internet. Organisations in the UK have found that a mixture of postal questionnaires, followed up by telephone surveys works well. The postal questionnaire is less resource intensive, but the telephone follow-up increases the response rate (in the survey carried out in Scotland, the postal response rate was nearly 50% and the final response rate after the telephone survey was just over 80%) (Mohamed Shahin, 2013). The advantages and disadvantages of producer surveys, based on the UK experience, are summarised in Table 4.

Table 4 - Advantages and disadvantages of a dedicated producer survey

Advantages	Disadvantages
Data collection can be tailored to stakeholder needs and changed/adapted easily.	It is time-consuming and costly to carry out such surveys, especially on an annual basis.
Qualitative data on producer perceptions can be collected. This type of data is not so likely to be picked up by other methods.	Organic producers may feel over surveyed
While producers may find it difficult to participate, they may also feel that their opinions and data are valued and feel more engaged in the organic market.	Potentially low response rates mean that the data may not be statistically reliable

Source: Own data based on the UK case study

In the UK case study, an initial letter was sent to a sample of 1 000 producers to forewarn them that they would be telephoned and asked to take part in the survey. The mailing took 20 person hours and cost £425 or approximately 510 EUR³ (paper, envelopes and postage but not including costs of staff time). Casual staff was hired at a rate of £17.50 per hour to carry out the survey. They took a total of 300 hours from mid-November to the end of December, giving a total cost of £5 180 (approximately 6 200 EUR), with additional telephone expenses totalling approximately £300 (360 EUR). One researcher was responsible for collating survey responses, reviewing and correcting data entries where needed, answering survey team queries, carrying out running statistics to check coverage of the survey, final analysis and reporting of the data. In total, the survey took approximately 4 person months to complete with estimated total costs of approximately £12 000 (14 400 EUR).

³ 1 € = £0.83333

4.4 Improving estimates of production volumes and values



Crop production volumes can be estimated by taking production areas (which are recorded for Eurostat) and multiplying them by standard yields. This approach was investigated in detail in France and Italy.

Also national yield estimates were estimated in some of the MOAN countries and multiplied by crop areas. The results were then compared with production volumes reported by CBs as a cross-check of those data.

Some crop yield data can be collected by carrying out annual surveys. However, to carry out yearly surveys for all products would be costly and time consuming, so that expert estimates may be required. Also carrying out a literature review to identify appropriate recent scientific publications and studies (where available) can be used to supplement surveys. The French and Italian case study teams both used a combination of these approaches, including the use of expert panels.

Estimating yields on a national basis can be very difficult, as yields can vary considerably depending on variety, farm, region, weather conditions, and disease prevalence so a regional approach is often required.

There are also specific products for which estimating production volumes is particularly difficult. The French case study highlighted the difficulties in estimating production volumes for vegetables and fruits. In the Eurostat return on production areas, many types of vegetables (and similarly for fruits and berries) may be classified together as “field-scale vegetables”, “greenhouse vegetables” or “other vegetables”. This means that it is not straightforward even to obtain the production area. For fruit, the tree density and characterisation of the orchards are not always recorded. Also orchard yields can vary depending on the management of the orchards (which can be very extensive or very intensive), the varieties of the fruit and from year to year (depending on weather conditions, pests and diseases) and the segment of the market intended to supply (fresh fruit, juice etc.).

To verify organic yield estimates, they can be compared with conventional yields, as it is unlikely that the organic yield will exceed this number. In the French and Italian case studies it was verified that none of the organic crop yields exceeded the mean conventional crop yield.

The French case study found that having an overview of the volumes that are produced and that could, therefore, be sold on the organic market is interesting, but stakeholders may be more focused on the volumes actually sold on the organic market. Estimates of this should take the whole product chain into account: the amount consumed on-farm or lost at the different stages in the food chain before the final retail; the processing coefficients for the different final products (e.g. from wheat to flour and then to bread); and the amount that is sold on the conventional market. In future, it is envisaged to set up a permanent and enlarged national group of experts in order to obtain more accurate annual yield estimates for the French organic market.

Production values can be estimated by multiplying the production volume (possibly estimated as discussed above) by the relative producer price of the crop or product. It may be possible to obtain data on prices from agricultural stock exchanges, as was investigated in the Italian case study. Otherwise some price data may be collected by producer surveys (as in the UK case study where milk and egg prices were collected) or using expert panels (see Chapter 6).

In Italy, approximately 40 person-days (about 20 per team) were required to set up the data collection and analysis methodology. Since this was the first attempt to carry out volume and value estimates for Italian organic crop production, a lot of time was spent collecting information regarding crop yield estimates from experts. A statistical analysis was carried out to check for potential inconsistencies and to control the coverage of the survey. In France, 10 person-days (2 per product) were needed to set up the methodology, identify the potential sources of data, collect, analyse, and validate these additional data.

4.5 Lessons learned

- Some private bodies (such as organic control bodies) may have developed their own data categories adapted for their specific needs and may have low awareness of Eurostat categories; dialogue might be required to achieve harmonisation with Eurostat categories.
- FADN data can be used to give information about production (e.g. yield, farm-level prices), especially if sample sizes are sufficiently large to give good coverage of organic farms.
- Producer surveys can be useful to supplement production data, targeting specific data gaps and providing more up-to-date insights, but survey fatigue of organic producers may occur. Telephoning producers may help to increase response rates for emailed or posted surveys.
- Estimating yields should make use of a combination of different approaches, such as results from scientific studies and previous projects, (regional) experts, expert panels as well as specific studies/surveys which can give detailed data but are time consuming and costly.
- The following sector specific observations were recorded:
 - Grain traders can be important data providers for arable crop production volumes.
 - Slaughterhouses may be able to provide data on production volumes for livestock, but conversion from carcase weight to weight of meat for market might be required. Also, in countries where a large proportion of organically produced livestock is slaughtered as conventional (e.g. Czech Republic, UK for some products) a data gap may occur due to the animals that have left the organic chain.
 - Milk volumes are often collected by authorities directly from the dairies – and if not, can be collected there by any data collector.
 - Egg production can be estimated by the number of laying hens, and an average number of eggs per hen and year.

5 Domestic trade/retail data

At present, there is no harmonized collection system for organic retail sales data, and only very few countries publish official statistics. Most countries use a mixture of different sources to estimate the total value of the domestic market, including household panels, retail panels, specific surveys and expert estimates (see Appendix B and Gerrard et al., 2012). Difficulty exists in covering the less traditional sales channels that are important for organic food, such as specialist and artisan shops (e.g. butchers and bakers), market stalls and various forms of direct sales. In some countries (e.g. Germany and France which both have well-developed organic markets) additional panels exist that specialise in organic sales channels (see Biovista panel below).

Improvements to estimating domestic retail sales through different sales channels were foreseen in four of the six case studies.

- In the UK, a change from using household panel data to using retail panel data based on EPOS (electronic point of sale) was aimed at improving accuracy and disaggregation by product groups. Furthermore, the coverage of non-multiple outlets was improved through the use of additional surveys.
- In the Italian case study, a comparison between the two main datasets (household panel data and EPOS data) on domestic market data was performed.
- In France, the total estimate of the market value used a sector based approach, relying on various surveys and data provided by sector bodies (e.g. for milk, meat etc.).
- In Germany, the main aim in relation to this data category was to explore the continuation of using the organic market task force (Arbeitskreis Biomarkt), consisting of several different market data collectors, to arrive at a shared estimate of the total market value.

All other countries were also asked to comment on their experience of estimating the total national market value combining the different retail sales outlets (see Section 5.4).

5.1 Using EPOS data and household panel data



The Italian and UK case studies investigated two different approaches to retail sales data collection: electronic point of sale data compared with household panel data.

Source: Nielsen Household Panel Scanner

In the UK, the Soil Association made the decision to move from using Kantar World Panel data (household panel) to using Nielsen data (EPOS) for its organic market report 2013, published in March 2014. The main reason for this change was the perceived risk of potentially missing 20-25% of sales data through 'on-the-go' purchases, such as take away lunches/beverages etc., which are not picked up by data collection methods based on home-scanned products, but are usually collected by EPOS data. In

Italy, retail sales data for multiples are either estimated by ISMEA using GfK-Eurisko household panel data or by AssoBio, based on supermarket scanner data (EPOS). Due to a substantial difference between the two data collectors describing the same sales channel for domestic organic sales for 2012, the Italian case study cross-checked the different sources of organic retail data at supermarket level to identify potential sources of the inconsistency.

With the use of EPOS data in place of household panel data in the UK, it is hoped that accuracy will be improved, as there will no longer be a reliance on panel members remembering to scan all purchases when they get home. This should ensure a more accurate picture where purchases of goods such as snacks and lunches are concerned. There is, however, a risk that if a product is not correctly recorded as organic by the retailer, this could lead to some errors and missed, or wrongly labelled sales. The disadvantage of trade panel data such as EPOS is that they do not track individual households thus allowing for consumer analysis. Household panel institutions regularly collect data from their panel members on e.g. educational level, household size or their opinion on organic food. EPOS data also do not differentiate between household purchases and large-scale consumers such as takeaways and restaurants.

In the UK, the Nielsen data for 2012 was cross-checked with Soil Association and OMSCo (the Organic Milk Suppliers Co-operative) data before moving to the new data source. The Nielsen EPOS estimate of £1.1bn for sales value through multiples and tracked outlets was in good agreement with the Soil Association's own estimate of £1.161bn, published in the previous years' report. Similarly for organic milk, OMSCo estimated annual milk sales to be £150m, Kantar (household panel) data gave an estimate of £113m and Nielsen a calculation of £140m. This suggests that the Nielsen data are improving the accuracy of the estimate. In addition, the Soil Association carries out its own additional surveys and will continue to do so in the future and the retail sale estimate in the annual market report is usually based on data from 5 different sources (see Section 5.4.1 and UK Case study in Appendix B) which are cross-checked against each other. Survey findings and purchased market data are used for sense checking against each other.

A check for extreme increases or decreases in values and obvious inconsistencies was undertaken in the Italian case study. In order to conduct a comparison, datasets from the previous year from both sources (AssoBio and GfK-Eurisko) were selected. In 2012, on average, the Italian organic market grew by 8%; changes of more than 35% were deemed by the Italian team to need further attention, requiring additional data checks to detect inconsistencies. However, depending on the type of product sold and on the market conditions, there might be a particular reason for such extreme differences (increase or decrease). This particular condition has been analysed with the help of market experts from AssoBio and ISMEA. Expert estimates on country-specific organic data have been used to double-check data quality and consistency.

In Germany, several panel institutions follow the organic market (such as GfK, Nielsen) and two panels have specialised in monitoring trends in organic shops: BioVista (see Box 1) and Klaus Braun. The case study focused on the task force that combines results from different sources to improve the estimate of the overall value of the natural food market in Germany (see 5.4.2).

Box 1: The German BioVista panel for specialist organic shops

BioVista was founded in 2003 as a retail panel specialising in organic shops. The aim was to offer a scanner-data based panel for the natural food sector in Germany as this sales channel was not covered by other retail panels such as Nielsen scan track. The approach used is similar to that used by other retail panels, except that organic outlets are targeted. BioVista obtains its data from about 400 organic shops using check-out scanners out of a total of approximately 2 500 organic shops in Germany. Shops taking part in the panel are not paid, but receive a monthly report on their sales by product and a comparison with other shops. Because of the requirement for scanner check-outs the sample represents the better developed, modern, and engaged shops. Like for other panels, processors can purchase the data and use the panel results for comparing their products with those of competitors, including reports on product ranking, product range, sales management, single items or other specific topics. BioVista is a commercial organisation but at the same time provides a degree of market transparency (at least to those who can afford to purchase the reports). BioVista is part of the “Arbeitskreis Bio-Markt” task force and together with Klaus Braun delivers data on sales through natural food stores and thus helps to estimate the value of the natural food market in Germany (see Section 5.4.1).

In terms of costs, the Soil Association in the UK has set up an annual contract with Nielsen in order to receive a monthly data check on the value of the organic market and its categories, comparing the 52 week, 12 week and the 4 week position to the previous year. In preparation for the 2014 report, the data had to be sense-checked, cross-checked and combined with the separate information coming from the independent sector of the market, in order to get overall market totals. This amounted to approximately 3 days’ work. In Italy, no direct costs were involved. About 15 person-days were required to set up the data collection and analysis methodology.

5.2 Using surveys to collect retail data



In the absence of the specific identification of organic sales in the official consumption data in France, since 2005 a national survey of the organic market has been carried out annually by Agence Bio and the expert consulting company ‘AND International’. As part of the case study, the 2013 survey was reviewed with the aim of obtaining more detailed data in as many fields as possible.

Agence Bio has conducted sample surveys and produced five questionnaires:

1. One directed at farmers, aimed at obtaining data on direct sales (7 539 farmers with a valid mail address out of 9 342 farmers notified for more than 2 years - to exclude the conversion period – practicing direct sales and excluding wine which is covered by a specific survey);
2. One dealing with retail sales by the 10 specialised organic store chains;
3. One sent to the 10 main supermarket chains;
4. One directed to the main processing operators (1 500 out of 9 350 notified processors) and separated by product categories;
5. A special survey dedicated to wine operators (sent to 1 200 farmers and 100 cooperatives and trading companies).

General response rates varied from 13% (direct sales), 28% (processors), to 90% (supermarket chains). It is very difficult to obtain information from operators in small or competitive sectors as they are reluctant to give them. Volume data remains much more difficult to obtain than value data.

The main data checks included comparison with prior year data, investigation of unusual year-on-year movements, and comparison with the overall food retail market movements within the country.

Regarding costs for the French case study, three person days were needed to compare the classifications, to find a more compatible reference system, and add more detail to the questionnaires when possible/relevant. No other costs resulted from this special study, and the rest was part of Agence Bio's usual annual survey budget (about 100 days in total).

5.3 Collecting data on independent retailers, farm shops, farmers' markets, and direct sales



One part of the UK case study investigated getting better data on sales through non multiple sales channels. The Soil Association carries out a survey of independent retailers in which it asks whether they make sales through farmers' markets, box schemes, farm shops, high street shops and catering. The coverage of box scheme sales and high-street shops has been consistently good in the past. For farmers' markets, farm shops and catering, however, responses have been few and collected data have been quite minimal. It was therefore decided that:

1. Two other main surveys would be distributed at an earlier date, and those targeted were more vigorously pursued for timely completion.
2. More detail would be requested in the top 100 survey (top 100 licensees by turnover) to help identify which respondents were supplying the catering sector.
3. FARMA (Farm Retail and Markets Association), the representative umbrella body for farmers' markets and farm shops, would be approached to work with the Soil Association on a joint survey targeting FARMA members, in order to secure much more data related to these outlets.
4. An additional survey of independent retailers would be carried out in partnership with Natural and Organic Products magazine.

Additional detail on catering sales was requested in both the independent retailer survey and the survey of their top 100 licensees (by turnover), enabling the Soil Association to account for the organic turnover of 22 companies involved in the catering market (based on 8 small independents and 14 companies). The surveys were distributed by e-mail in early December 2013, choosing an earlier date than in previous years and prospective respondents were more energetically pursued for completion than in previous years.

In addition, The Soil Association developed two online surveys, which were adjusted and distributed by FARMA/Lloyds Europa (marketing business arm of FARMA) to its database of farm retailers and farmers'

market traders. Lloyds Europa estimates that there are 750 farmers' markets in the UK, and 200 of these are FARMA members. The estimate for numbers of farm shops is 4 000, around 400 of which are FARMA members. Unfortunately it was not possible to develop the survey in time to use its results in the Organic Market Report 2014. It is now aimed for completion later in the year and an additional publication will result from it. When distributed, the survey will provide useful insights into a range of areas in addition to the organic turnover of farmers' markets and farm shops:

- Regional distribution
- Market stalls and shops per individual business enterprise
- Turnover split between product categories – fruit and vegetables, dairy, meat, non-food etc.
- Percentage of turnover from organic products
- Sales performance 2013 – rate of growth or decline
- Some insight into the impact of the horsemeat controversy in the UK⁴ on sales
- Relative importance of various product differentiators to farm shop and farmers' market customers: fresh, locally sourced, free range, organic, Fair-trade.

An additional survey was carried out by the main UK organic magazine, Natural & Organic Products and sent directly to a selection of 3 000 of its readers. The objective of this survey was to supplement the information which the Soil Association gathered in its own independent retailer survey and to capture data from businesses whose focus was 'health foods' alongside organic foods.

The experience shows that all four new elements of the approach detailed above offered the opportunity to improve the accuracy of market valuation through a richer set of data. This has been delivered most meaningfully and usefully in the case of catering sales, with the expectation that the most useful data of all for improving the accuracy of market data will emerge from the surveys of farmers' markets and farm shops when these are completed.

In terms of costs, the two surveys aimed at improving data on farm shops and farmers' markets have used 20 person hours so far. Including telemarketing, data collation, data analysis and publication online, the total estimated cost is 150 person hours. The primary author of the Organic Market Report (an external consultant) spent 15 hours collating and analysing the data from the survey of independent retailers to identify overall figures and trends.

5.4 Improving the annual total retail market estimate



As organic products are sold through different outlets, there is no one source estimating the whole national organic market value. This was the focus of the German case study, but all countries were asked to contribute their experience. Each country approaches coming to an

⁴ In early 2013 it was discovered that some "beef" products being sold in the UK in fact included horsemeat and that their labelling did not reveal this.

overall estimate of the retail market value differently, depending on the data that are available and affordable. All the approaches have in common that they combine a number of data sources in a piecemeal or “jigsaw puzzle” approach to provide the best estimate of the overall market (e.g. combining data on sales through multiples with data on sales through independents).

Where more than one possible source of data is available, cross checking is often used to improve data accuracy.

5.4.1 Annual market estimate in the UK

The Soil Association uses its own surveys to calculate market figures alongside the data that it purchases from market research companies. The market report 2014 is based on five main data sources:

1. In-house surveys by the Soil Association of
 - a. All licensed independents (32 responses)
 - b. Their top 100 licensees by turnover (30% response rate)
2. Survey of 3 000 independent retailers carried out by Natural & Organic Products magazine in conjunction with the Soil Association, with a response of 40 retailers
3. Survey of the multiples by an independent consultant (good participation, only one major multiple failed to submit a response in 2014)
4. Data from Nielsen (previously from Kantar)
5. CSD (certified sales data) returns from SA certification (e.g. used to get numbers for the health and beauty and textiles data categories and for cross-checking).

Survey findings and purchased market data are used for sense checking against each other to ensure that the impact of limitations in any single source of data is minimised, and that market trends are appraised in a balanced way.

5.4.2 Annual market estimate in Germany

In Germany, the organic market is estimated annually by the ‘Arbeitskreis Bio-Markt’ task force that is coordinated by AMI. Several organisations are involved, ranging from the German umbrella association for the organic sector (BÖLW), the panel institutions GfK, Nielsen, BioVista and Klaus Braun, and the Universities of Kassel and Weihenstephan-Triesdorf (which both have substantial experience with data collection in the sector). As there is no market data source that reflects the whole market, a piecemeal approach was developed in 2009 and 2010 for estimating the German organic market on a regular and voluntary basis. GfK household panel data are used for fresh products and dairy in supermarkets, as well as all products sold in bakeries, butchers, box schemes, farmer’s markets and farm shops. Additionally, Nielsen scan track data are used for organic packed items in the supermarkets. BioVista trade panel data (see Box 1 on P.15) and Klaus Braun trade panel data are used for estimating the value of sales in organic shops.

The following problems with this approach were identified during the case study:

1. So far, all panel institutions provided their data free of charge to the other members of the task force; this is problematic, as some of them usually sell their data.

2. Communication between the involved organisations, who are also competitors, was not always easy. It was decided at the start of the collaboration to keep results confidential until they were published at the annual BioFach. However, in 2011 and in 2013 major data leaked out too early.
3. Different panels have different coverage rates, and except for trade panel data such as Nielsen scan track, Klaus Braun or BioVista data, they do not cover 100% of the respective organic market segment. Additionally, household panel data does not show catering and restaurant sales. For butchers, bakeries, farmer's markets, farm shops and box schemes the data from the GfK household panel show too much variation and it is not clear how much of the market is covered.

As part of on-going contract and collaboration, AMI regularly buys and analyses GfK household panel data for fresh products through the year and cross-checks with other sources according to promotions in the multiple chains and also with the development on the product markets. Monthly GfK raw data are bought for the following organic and conventional products: meat, meat products, poultry, eggs, cheese, fruit, vegetables, potatoes, bread, vegetable oils, milk and dairy products.

5.4.3 Annual market estimate in Italy

At present in Italy there is no market data source that reflects the whole organic market. The value of the large retail market for organic products (supermarkets, hypermarkets, drugstores) is estimated by ISMEA, using ISMEA/GfK-Eurisko panel data. These data are not published in the form of absolute values, but only as trends compared with previous years. AssoBio also provides an estimate of the large retail market, based on supermarket scanner data. There are very limited data on the specialised organic market: some information is available from AssoBio, which provides estimates based on both expert opinion and data from a number of the largest distribution companies in Italy. Bio Bank also provides data on the number of outlets involved in direct sales, public canteens and restaurants, but does not provide information on retail volumes and values. The estimate of the total organic retail market in Italy is therefore very difficult at present.

During the Italian case study, some issues were identified that should be taken into account when planning to estimate the total organic retail market in Italy.

- The two estimates of the large retail market value for organic products (ISMEA and AssoBio data) give substantially different results. In the next few years, the institution involved in collecting and publishing organic retail data in Italy should start a consistency check of the GfK household panel data, at least for some products.
- ISMEA and AssoBio monitor data on domestic consumption only in the non-specialised market.
- There are no official statistics available on sales through the specialised channels: AssoBio obtains information from some of the largest distribution companies that exclusively supply specialised retailers, however these data are not publically available. Volumes and values of sales are not yet estimated for sales of organic products through public canteens, catering, restaurants, direct sales/farmers' markets and other alternative sales channels, such as solidarity purchasing groups. For these types of sales there are only Bio Bank data on the

numbers of outlets. An annual survey of both specialised shops and other sales channels (farmers' markets, catering/restaurants, etc.) should be developed to estimate the size of the market and to cross check with the data from AssoBio. It appears necessary to finance the estimate of the value of organic retail sales through specialised outlets and sales channels by public institutions in order to arrive at a reliable estimate of the total value of organic sales in Italy.

5.4.4 Annual market estimate in France

With the help of a consulting firm (AND international), Agence Bio carries out an annual estimate of the total market value at the retail level around May of the following year. Internet and/or postal and/or telephone surveys carried out by Agence Bio and AND are combined with other sources, e.g. Symphony IRI panel data for general supermarket retail.

For the general supermarkets, the IRI panel data represents roughly 70% of the total sales of the sector. Products with variable weights are not included. Wines are also not included in the IRI data, but data are acquired separately. Sales values in the discount sector are estimated by AND international, based on interviews and price/reference censuses in shops. The specialized network retailers' detailed sales are estimated based on a survey carried out by Agence Bio and AND.

Direct sales and artisans sales (e.g. butchers and bakers) are also estimated using data collected within a survey. Because they concern many different small entities, extrapolation rules can be hard to define, some sectors being over represented because of their willingness to answer the survey (wine sector for example). Where necessary, calibrating surveys focusing on a certain population are carried out to improve the accuracy of the estimates.

Estimates for sales in specific sectors provided by sector organisations are used for overall estimates. The CNIEL (*Centre National Interprofessionnel de l'Economie Laitière*) works on volumes and values for milk and dairy products based on the IRI Symphony data. The products monitored monthly are: liquid milk, butter, yogurts, fresh dairy, fresh cheese, cheese, and milky desserts. The data collected concerns only general supermarket (multiple) retail, but in France, many other sales routes exist for dairy products. Agence Bio estimates that the data on dairy products (excluding liquid milk) represent roughly 60% of the retail sales in France.

Interfel is the sector association of the fresh fruit and vegetable sector, working specifically on organic products. Interfel runs a panel with Kantar, based on the consumption of 14 fruits and vegetables: tomato, zucchini (courgette), melon, onion, salad, carrot, cucumber, cauliflower, leek, apple, pear, kiwi, peach and nectarine. The panel gives estimates on volumes consumed and the corresponding value by household. 20 000 households are part of the panel. The individuals scan their products at home and send the data to Kantar. The extrapolation is carried out on various criteria (age, sex, city, employment, etc.).

Answers from both operators and retailers allow the expert team of AND International to compare tendencies from upstream and downstream players and draw sound estimates.

5.4.5 Annual market estimate in the Czech Republic

So far, no comprehensive statistical survey of the organic market covering producers, processors, the retail sector and households has been carried out in the Czech Republic. Therefore, as part of the case study, the Institute of Agricultural Economics and Information (IAEI) sent a survey to all producers and distributors from the register of the actors in the organic sector in order to identify the volume of the organic food they offer.

The following two crosschecks were carried out:

- 1) IAEI has sent out questionnaires to 320 actors, from which about 50 organisations (usually small) did not respond. The questionnaire consisted of very few questions, on total turnover of organic products, breakdown by type of organic products (36 subcategories), percentage of direct imports and distribution channels. The size of the organic retail market was defined as the sum of turnovers of registered processors and distributors for the sale of organic products to final consumers in retail shops or through direct marketing. To estimate the retail sales value from this, the sum of turnovers is increased by 30% to represent the retail mark-up. A further increase is made to account for the sale in the international retail chains (13 major retail chains) of organic food imported into the Czech Republic from abroad (see below).
- 2) 13 major international retail chains (these are Ahold, Billa, Coop, dm drogerie, Globus, Kaufland, Makro, Marks and Spencer, Penny Market, Rossman, SPAR, Tesco and Lidl) were also surveyed about total turnover of organic products, breakdown according to the type of organic products (only 8 subcategories) and percentage of direct imports. The results were mainly used for cross checking with the above survey because of concerns about data accuracy. The main problems identified were that these retail chains usually do not monitor organic products separately from conventional ones, and different classifications system for particular types of organic products compared with international and Czech standards are used.

The common problem of both approaches of estimating of total organic retail market is that the questionnaires (both) are voluntary and not compulsory (they were distributed by IAEI not by Czech Statistical Office or Ministry of Agriculture) and response rates can be low.

5.5 Lessons learned

- Product classification systems vary considerably between different data providers, with market research companies and retailers using their own in-house systems adapted to their needs. This makes data cross checking and comparisons between different data sources over time and between countries difficult. There is a need to use one classification system for retail data against which private systems can be mapped.
- Users of panel data (household or retail) should be aware of the methods and approaches used in the data collection and potential limitations of the data (see Box 2 household panel below).
- Special surveys targeting organic operators or alternative sales channels are needed to collect detailed retail sales data in such outlets, except where specialist panels for specific outlets exist (see Box 3 below).

- Partnership with producer organisations, such as France's interprofessions, is worthwhile and joint surveys often allow better coverage and information, and should improve response rates\.

Box 2: Relevant issues to consider to reduce the risk of errors when using household panel data:

- What data collection method was used? (Electronic diaries and scanners, interviews, surveys etc.). The interpretation has to be carried out specifically according to the method of collection.
- How are the data transferred to the organisation conducting the analysis? Do the data need to be entered by hand at any stage; and if so, are they then checked by at least one other person?
- Are the data checked for plausibility (for example comparing with regularly updated minimum price ranges to avoid wrong classification of conventional products as organic)?
- In which retail channels was the data collected? The interpretation and data checks have to be done specifically according to the channels included in the study/collection.
- Is the data interpretation taking into account that often many sales channels are not included (e.g. take-away, restaurants, school canteens, coffee shops etc.)? Does it also take into account that sales in farm shops, farmers' markets etc. are likely to be under-estimated.
- Is the data interpretation taking into account that many "on the way purchases" such as snacks are not reported and thus a coverage gap arises?

Box 3: Collecting data on sales through independents, farm shops, and farmers' markets through additional surveys

- Producer surveys can include questions on direct sales – sales routes, volumes, values, produce sold.
- Additional surveys may be possible, perhaps jointly with umbrella organisations for independents retailers or for farmers' markets.
- CBs may be able to contact independent retailers registered with them and ask them to fill in questionnaires.
- In some countries retail panels exist which cover specialised organic retailers.

6 Farm-level prices



Organic farm level prices are important for farmer decision-making, but only very few countries regularly publish such data and gaps in availability remain. Farm-level price data were considered mainly in the German case study. For the first time, the well-established approach of AMI for farm-level price data collection was compared with price data collection approaches in other countries. This comparison should be very useful for the stakeholders involved.

6.1 Data collection approach

In Germany, producer prices have been collected since the 1990s, on a weekly or monthly basis, depending on the product. Data collection approaches are more developed than in many other countries. AMI collects farm level price data using a number of approaches: standard Excel questionnaires sent by data providers to AMI, price lists provided by traders and telephone interviews. The prices are all collected in a database and weighted with the size of the enterprise (either by area or by sales volume, or for livestock slaughtered by the number of sold animals). AMI also make use of producer price panels, which provide varying coverage of the market. For example, the surveyed potato packers and producers cover 80% of the market and the milk panel 90% of the market. However, the egg panel does not include the two largest companies that mainly deliver to discounters, and so covers only 10% of the market and suggests higher prices than the two larger companies would pay. This highlights the importance of stakeholder involvement: the producer price data will only show a good level of accuracy if the majority of producers and traders are willing/able to take part.

Other methods to collect farm level price data include producer surveys which can be used to collect data on prices for some key agricultural products at farm-level. However, some farmers may not want to reveal the information if they feel that their customer is giving them a particularly good price and, in some cases, may be contractually bound not to reveal such information (see Section 4.3 for UK experience in carrying out a producer survey). Potentially, FADN data could also be used to obtain some farm-level price data (see Section 4.2 for the experience of using FADN data in the Czech Republic). In the Italian case study, in the context of estimating production volumes and values, data on producer prices collected by ISMEA were cross checked with data coming from agricultural stock exchanges that report organic data separately. However, in the current year only production volumes (rather than values) will be published (see Section 4.4 for further detail).

In 2013, AMI started to compare European prices for several organic products to give European traders an overview of price development in different countries (see Table 5). Greater detail on this, including some information about data collectors in France, UK, Italy, the Netherlands and Denmark is given in the German section of Appendix C.

Table 5 - Overview of producer price data collections

Price collection system	Products	Level of processing or packaging	Transport costs	VAT
DE: AMI	All	Sorted and cleaned, but not packed	Carriage free processor	excluded
UK: Soil Association	All	Unknown	Farm-gate	excluded
FR: RNM	Fruit, vegetables, potatoes	Mostly retail and wholesale stage for non-processed fruits & vegetables	Carriage free processor	Excluded in wholesale markets Included in general supermarkets
FR: La Depeche	Cereals, protein crops, oil seeds	Loose, and cleaned	Carriage free processor	excluded
IT: ISMEA	All	Both loose and packed	Carriage free processor	excluded
IT: Stock Exchange Bologna	Cereals, protein crops	Loose, in bulk	excluded	excluded
NL: Stock Exchange Emmeloord	Onions, Carrots	Onions raw, Carrots packed in parings	excluded	excluded
DK: Friland	Pigs and Beef	Animal carcasses	Slaughterhouse	excluded

Source: German case study

In terms of time and costs, for the German case study, the database and conversion tables were developed within 4 days. Analysis tables and cross-checks took an additional day. Collecting price data took another 2 days. Once the system has been developed, data collection takes about half an hour every week.

6.2 Lessons learned

- There is a need to set up an organic farm-level price reporting system, or to attach organic producer price data collection to an existing system for conventional prices.
- A range of sources can be used to collect farm-level prices: as part of a producer survey, from FADN data or from CBs and agricultural sector organisations, but there are a number of difficulties when comparing data from different sources (see Box 4).
- Producer panels can also be a relevant data source, but will only show a good level of accuracy if good coverage is achieved and the majority of producers/traders are taking part.
- Agricultural stock exchanges for organic products could be a source of data on farm-level prices: at present they only exist in Italy, for cereals and oilseeds, and in the Netherlands for carrots and onions.

Box 4: The main difficulties in comparing farm-level prices from different sources

- Different publishing dates and frequencies.
- Different product categories.
- VAT inclusion or exclusion (and the rate of VAT where it is included).
- Whether prices are “farm-gate” or include transport/delivery costs.

7 Retail prices



Prices at retail level give some indication of the cost of organic products for the consumer; especially when compared with conventional prices to calculate the organic premium (the additional price charged for organic products). However, there is no EU-wide harmonised product classification and nomenclature, which would allow price comparisons between regions/countries (Rippin et al. 2006).

Retail price data were only considered in the Czech case study. Retail price data collection is also ongoing in Germany (GfK/AMI), France (RNM, only fruit & vegetables), Italy (ISMEA), the UK (Soil Association), and Switzerland (BLW) but was not covered by the respective case studies.

7.1 Data collection approaches

Retail price data are generally collected on a commercial basis and, in many countries, may only be available for sales through multiples. Due to the fact that such data are generally collected by market research companies, they are usually only available at a cost; and there may be restrictions as to how much of the data can be made publicly available in subsequent reports. During the Czech Republic's case study, negotiations with Green Marketing led to the provision of data from 2009-2013, meaning that more up-to-date price data than had originally been anticipated were made available for the market report. The experience from this case study shows that negotiations with market research companies are well worth pursuing as they may be willing to release older price data for use in constructing timelines, and giving background information on the organic market and its development.

Using the example of milk, the Czech Republic case study also involved a comparison of organic with conventional food prices. The results showed that the retail sales price was more strongly influenced by packaging than by the organic or conventional nature of the milk. Milk and yogurts sold in glass bottles were more expensive, regardless of their organic or conventional status. Organic butter was more expensive than conventional, but in this case there were also expensive products within the conventional butter section in some retail chains, which were sold at the same price as the most expensive organic butter. This illustrated clearly that when comparing prices it is necessary to compare the organic product with a conventional product of similar quality or packaging.

In Germany, AMI generates monthly retail prices from GfK household panel data. It is part of the contract with the GfK, that AMI carries out monthly crosschecks and re-assesses retail prices by investigating prices that are too low and declaring them to be conventional sales. Organic businesses can subscribe to receive monthly price reports at a cost.

With regards to costs for the Czech Republic case study work on prices, the costs originally incurred by Green Marketing are not made public, due to the commercial basis of the data collection. One year of data costs customers of GM 47 500 CZK, or approximately 1 727 EUR⁵. Total direct costs incurred for the data from 2009 – 2013 were 237 500 CZK, or approximately 8 635 EUR. Additional time input was needed to process and analyse the data, approximately 2 month's work for 1 full-time working person. This additional expense cost about 60 000-70 000 CZK, or about 2 500 EUR.

7.2 Lessons learned

- It may be possible to negotiate with the commercial organisations (e.g. market research companies) that collect retail price data to access older data for lower costs. These data may still be very useful in providing information on price trends and market development.
- When comparing price data between organic and conventional produce, it is necessary to compare the organic product with a conventional product of similar quality and packaging.

⁵ 1 EUR = 27.5 CZK

8 Import/export data



Imports from within EU and from non-EU countries, including third countries, represent an important part of domestically consumed organic products in most Member States (European Commission 2010; van Osch et al. 2008). International trade data are important for traders, as well as for calculating national consumption figures, data checking, food safety, and monitoring for fraud; but they are not widely collected throughout Europe.

Import/export data were investigated in four of the six case study countries.

- In France, Agence Bio worked with the Ministry of Agriculture and French customs to obtain additional data on imports and exports from third countries (i.e. non-EU countries which are not on the compliance list) which complement existing survey data.
- In Italy, an integration and cross-checking of various sources of data on imports was attempted (MIPAAF and customs data). The Ministry initiated the use of a specific code for organic products in the customs record, which allowed such data to be collected for the first time.
- In the Czech Republic, different sources were combined to estimate export to and import from a number of countries.
- In the case study of the Mediterranean Organic Agriculture Network (MOAN), export volumes and values for five major crops and products were checked in Turkey; attempts to contact importers and exporters were made in Lebanon and detailed feedback was received from all five certified organic exporters; two datasets (data from CBs and data from customs) on exports were cross checked in Serbia; and in Tunisia available data on 2012 organic export values were reorganised to be presented in a more detailed way, more specifically disaggregated by product and country of destination (the exercise could be carried out only for export values data, since the simultaneous publication of export volume data, although they are available, in such a disaggregated way was judged sensitive by national institutions for its potential commercial strategic implications).

As an addition to the French case study, Helga Willer (FiBL) and Diana Schaack (AMI) carried out a review of import data collection methods in various European countries (Germany, Italy, Denmark, Czech Republic and France). The results of this study are available as Appendix D in this report. Denmark has been included in this Appendix as their approach to organic international trade collection (described briefly below and in greater detail in Appendix D) could be adopted by other countries. The experience from a German project within the Federal Organic Farming Scheme and other forms of Sustainable Agriculture (BÖLN), on imports into Germany (Schaack *et al.*, 2011) could also be utilised.

Essentially there are three types of import/export data to be considered:

1. Import/export from/to outside the EU, but with third countries that are on the compliance list;
2. Import/export from/to outside the EU, and involving countries that are not on the compliance list; and

3. Import/export within the EU.

Table 6 summarises the different approaches to obtaining data for the different types of imports that were explored.

Table 6 - Import data collection methods

Methods (example)	Trade type	Comments
Import estimates (volumes) of importers/control bodies for organic import authorisations (DE, CZ)	Imports from non-compliant countries only	Only a prediction, no real values/volumes
Data from customs (IT, FR)	Import from countries on the third country list	Collaboration with customs authorities essential
Importers' self-declaration (IT)	All import from third countries	So far only used in Italy
Surveys among importers (DE)	All imports	Only a sample of organic importers is covered in Germany
Panel data (DE)	All imports	Only if country of origin declared in the product description
Foreign trade statistics (DE, DK)	All foreign trade	Published data in DK based on data submitted by organic exporters and importers (for intra EU trade) and customs (for third countries). For all other foreign trade statistics: No common organic identifier.

Source: Own data

8.1 Using import authorisations and customs data for trade outside the EU



The data on import/export from/to outside the EU can be collated from import authorisations and customs declarations. In some countries these may already be collated and partly analysed by the Ministry of Agriculture. Where data have not already been collated, the customs data may only be available in raw form, directly from the customs authorities, and so a large amount of harmonisation, checking and analysis may be required.

The Czech Republic case study team were given access to data from declarations (import authorisations and export certificates for trade with non-EU countries that are not on the compliance list) but the data were provided in disaggregated form, making it necessary to aggregate and categorise the data.

The initial stage of using customs data involves obtaining permission from the appropriate authorities to access the data and to publish aggregated results of the analysis. This process may be quite complex and time-consuming, so should be started as soon as possible once it has been decided to attempt to use customs data. A factor, which can also increase the time needed to analyse the data is language. Some declarations may be written in the language of export destination or import origin and may require translation.

In Italy, data on imports from outside the EU are collected by the Ministry of Agriculture in the form of import authorisations and self-declarations and by customs. As part of the case study, it was therefore

possible, to use the three datasets as checks against one another. For example, it was checked whether self-declared volumes imported were lower than the volumes authorised by the Ministry. This should be the case, because companies tend to request authorisation for a larger amount than they eventually import (see Figure 1). To make use of customs data, it was necessary to add organic status to the customs documentation. This has been done in Italy by adding information on the organic status of a product to box 44 of the SAD (Single Administrative Document)⁶. It was also necessary to harmonise the datasets before carrying out the cross-checks. This was done by converting the data collected by the Ministry of Agriculture to the TARIC classification⁷ which is used in the EU for customs data.

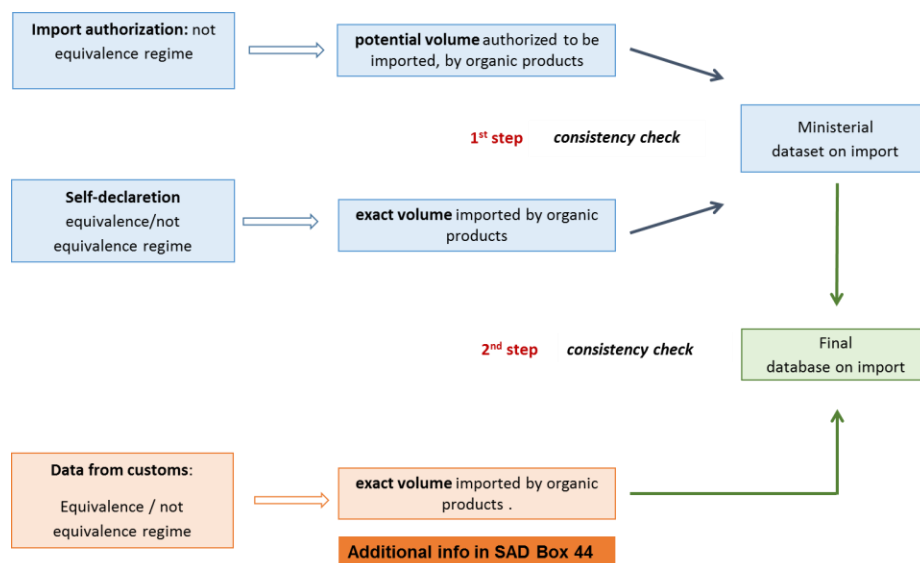


Figure 1 - Illustration of the data collection concept for imports from outside the EU in the Italian case study

Source: Italian case study (see Italian Appendix sub-section by Solfanelli *et al.*)

In France, similarly to the situation now in place in Italy, when an organic product is imported from a third country, the importer has to make a customs declaration and a national additional code is recorded in Box 44 of the SAD (Single Administrative Document) and reported in customs statistics. Agence Bio was provided with these data after dedicated meetings with French customs and the Ministry of Agriculture. Similarly to the Italian case study experience, it was again noted by the French case study team that the customs data nomenclature required additional harmonisation for comparison purposes.

A data cross checking approach, similar to that used in Italy, was also found to be very useful for export data in the MOAN case studies. In Turkey and Serbia, the data on export volumes and values from two different data sources - authorised CBs and Aegean Exporters' Association data in Turkey and CBs and

⁶ An example of the SAD can be seen at: <http://www.hmrc.gov.uk/forms/c88%281-8%29.pdf>

⁷ http://ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/customs_tariff/index_en.htm

customs data in Serbia - were compared, and inconsistencies were identified. The Serbian MAEP and Serbian customs staff expressed an interest in meeting Italian institutions for an experience sharing visit as the Italian Ministry and customs have recently adopted a specific code for organic imports of selected strategic crops.

The cross-checking approach to international trade data could be extended so that as well as checking two different national datasets (e.g. customs data and authorisations from CBs) data cross checked between countries. For instance, data from exporting countries (e.g. members of Mediterranean Organic Agriculture Network) could be cross-checked against import data from e.g. Italy and France.

Regarding costs, 30 person-days were required in Italy to set up the data collection and analysis methodology for the cross-checks. It was particularly time-consuming to harmonise the Ministerial dataset according to the TARIC classification used for customs data. However, this was necessary in order to compare the two datasets. In France, about 10 person-days were needed to clarify the procedures involved with French customs, obtain the official import data necessary, and process it. In the Czech Republic, the only additional time input was incurred to collect, process and analyse the data. To process import/export authorisations for one year accounted for 3-4 working days for one person.

8.2 Using surveys of organic market actors

Surveys of market actors can be useful in collecting data on international trade, as they have the potential to collect data on intra-EU trade as well as trade outside the EU. In France, these data are collected (along with data on exports) as part of Agence Bio's annual survey of the organic market, sent to the main operators within the organic market. The survey questions on international trade were made more specific in 2013 and asked respondents to distinguish between imports from third countries and from EU member states, as well as asking for their intra- and extra- EU exchanges in volume and value. In this way, the French customs data could be compared with data on imports from the surveys.

A similar approach to this was undertaken in Germany in 2013, where data were collected by a survey of importers, as well as using foreign trade statistics reported to the Federal Statistical Office. In this case, the foreign trade statistics were preferred to customs data. Import authorisations from customs data do not reflect the actual volumes imported, always exceeding those amounts. However, the foreign trade statistics do not identify a product as organic or non-organic, so knowledge of the organic status of the companies involved was required. Only data from companies that were 100% organic could be used. For other companies that traded in both organic and non-organic products it was not possible to tell which imports were organic.

In the Czech Republic, data on international trade (especially within the EU) are collected through the questionnaires sent by IAEI to the actors operating in the Czech organic food market.

Using a survey of importers/exporters or international trade data from a more general survey of organic market actors as a means of cross-checking customs or other international trade data, can be very useful. However, the main issue in surveying importers/exporters lies in identifying them so that good coverage is achieved. For Agence Bio this was possible as they could contact all the main organic market

operators identified using the French organic notification system (see Appendix C). For AMI in Germany, this was more difficult due to confidentiality reasons, and they estimate that their survey was sent to only about one third of all importers and of those one third responded.

In France, an additional 7 person-days were needed to collect and process data from the annual survey of operators.

8.3 Other collection methods and data checks

In the EU, statistics on trade between the Member States cover the arrivals and dispatches of movable goods recorded by each Member State. The statistical value of all such trade is based on the assessment basis for taxation purposes or the transaction value of the goods. It is the FOB (free on board) value for dispatches and the CIF (cost, insurance, freight) value for arrivals.⁸ The system set up for the collection of information on trade between the Member States as from 1 January 1993 is commonly known as Intrastat. Its main features are (Eurostat, 2011):

- Monthly statistical declarations sent directly by businesses to the competent national authorities;
- A system of thresholds abolishing all statistical formalities for almost two thirds of businesses;
- A close link with the tax system.

How this is implemented will vary between Member States.

External (outside EU) trade statistics are usually recorded on the basis of customs declarations submitted by the trader when clearing customs. The Single Administrative Document is used for this purpose. The statistical value is based on the customs value or, failing that, the transaction value of the goods. It is the FOB value for exports and the CIF value for imports (Eurostat, 2011).

In Germany, the statistical office collects monthly import/export data from traders who are obliged to report their trade volume and value by product for extra and intra-EU trade. A similar system is used in Denmark by Statistics Denmark (Appendix D) and in the Netherlands by Statistics Netherlands. Whilst in Denmark organic and conventional products are differentiated, this is not the case in Germany and in the Netherlands. However, the best and easiest way to collect organic international trade data would be by differentiating between organic and conventional products in the trade statistics. A number of data checks in relation to import data that were found useful in the case studies are summarised in Box 5 below.

It is worth noting that the full picture of import/export can only be obtained if all three types of trade (with countries on the compliance list, with countries that are not on the compliance list and intra EU trade) are taken into consideration. Trade within the EU represents an important part of international trade for many EU Member States, and so lack of data in this area forms a large data gap, as well as

⁸ See http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-GI-11-001/EN/KS-GI-11-001-EN.PDF

making it difficult to assess international trade and to calculate supply balance equations for key products. The lack of data on this important trade also impacts traceability and the prevention of fraud.

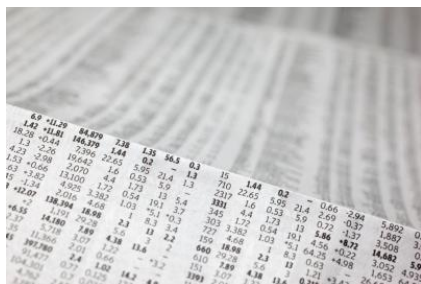
Box 5: Useful data checks for import/export data include:

- Assessing whether the amounts imported make sense when compared with volumes consumed in the country, e.g. if more is imported than is sold at retail level, then consideration may need to be given to the question of whether further processing or re-export takes place, or whether there is an error in a declaration.
- Similarly, if export exceeds domestic production, then it should be checked whether some products are imported for re-export or whether the customs data may be inaccurate.
- Comparison of data from different sources e.g. import data from customs could be compared with data obtained from surveys of operators within the organic market concerning imports of some products.
- Comparison to data from the previous year to analyse trends and investigate apparent inconsistencies.

8.4 Lessons learned

- Special customs provisions are made for organic products under the import regime. Some data on imports from extra-EU trade could be available from customs data if either a national code or the C644 code (Certificate of organic inspection) is included in the Single Administrative Document (SAD). Box 44 is already used for this purpose in some countries.
- Working with import authorisation alone has a weakness in accurately estimating the volume of imports. Most companies will apply for higher volumes for import authorisation than volumes effectively imported.
- There is no special requirement to monitor intra-EU trade as part of the organic control regime so it is most difficult to be able to obtain such data. However, it is likely that intra-EU trade may form the majority of imports and exports for some countries and some products, so this remains a big data gap.
- Other methods to gather export and intra EU trade data include dedicated surveys of exporters and other operators.
- The full picture of import/export can only be obtained if all three types of trade (with countries on the compliance list, with countries that are not on the compliance list and intra EU trade) are taken into consideration. Initial experience from the case studies suggests that the best and easiest way to collect organic international trade data would be by differentiating between organic and conventional products in national import/export statistics as is the case in Denmark.

9 Data consistency and quality checks



Once data have been collected, it is vital to carry out data checks to ensure that any data subsequently published are as accurate as possible, and to check for internal consistency within market reports. In the Chapters 4 to 8 above, data checks have already been outlined where they refer to the specific data type or data collection method, this Chapter reports some additional lessons learned.

The following data checks that were considered as part of the OrganicDataNetwork project are (Feldmann and Hamm, 2014):

1. Comparison between two years (e.g. 2010 and 2011) to investigate trends and highlight sudden extreme movements which may suggest errors.
2. Comparison of yields between countries with similar farming conditions.
3. Organic yield < conventional or total yield (as discussed in Chapter 4 about estimating production volumes and values).
4. The share of organic from total production data is generally smaller than the share of organic from total area data: organic production (share in %) < organic area (share in %).
5. Organic area < total area.
6. Imports < Sales (as discussed in Chapter 8 on international trade data).
7. Domestic organic consumption = organic products sold as organic + organic imports – organic exports (the supply balance equation (see Box 6) is also discussed further by Feldmann and Hamm, 2014).

Box 6: Supply balance equation

Basic version :

organic production + organic imports – organic exports = organic produce brought to the market

More detailed version:

organic production + organic imports – organic exports + organic stocks input – organic stocks output – organic products sold on conventional market = organic domestic uses + market losses

where

domestic uses = human consumption + industrial uses + animal feed + raw products for next production cycle.

Feldmann and Hamm (2014), Eurostat (2014), Hamm and Zakowska-Biemans (2006)

8. Market share (volume) = organic consumption / total consumption × 100.
9. Import share of organic human consumption = organic imports for human consumption / organic human consumption × 100.

10. $\text{Export share of organic sales from domestic production} = \frac{\text{organic exports for human consumption}}{\text{organic sales as organic for human consumption}} \times 100.$
11. $\text{Degree of self-sufficiency} = \frac{\text{sales of organic products as organic for human consumption}}{\text{organic human consumption}} \times 100.$

Not all of the checks were considered in each case study, as some countries do not have the data available (e.g. in the UK, there is no import/export data so any data check requiring these could not be implemented). The following observations were made:

- Data harmonisation is vital, i.e. harmonisation of classifications, definitions and methods.
- It is necessary not just to implement the data checks but also to think about the results.
 - A small absolute movement can appear as a large relative movement.
 - Organic yields may be larger than conventional yields if the organic produce is grown only in a specific part of the country with ideal growing conditions.
 - When comparing yields of different countries it is important that converted area and the whole production is taken as a basis (i.e. not just production for the market, but also including production for on-farm use).
 - It is important to be careful when comparing import data and retail sales data. Retail sales figures may not cover all food consumption (e.g. catering sales may be missing). Re-export, or imports of a raw product for further processing and selling within a different product group may not be accounted for. Also storage of a product for later use might be another explanation for imports exceeding retail sales in one year (Statistics Denmark, 2013).
- When comparing countries with different currencies, movements in value year on year may have been influenced by foreign exchange rate movements.
- Consistency checks between different approaches to collecting the same data can be very useful in highlighting issues, but will first require harmonisation of the data.

The German case study included checking and cross-checking of data from the previous year; and, on a much tighter timescale, data for the current year, by a separate institution. It was found that this approach was very helpful and greatly contributed to improved data quality. These checks highlighted the need to make designations more consistent, and add more correct headlines and explanatory notes under tables and charts. The German case study team concluded that “cross-checking of the report by an expert from outside the publishing organisation can only be good for the quality of any report”. Similarly, the Czech case study team considered the identification of useful methods and approaches for data quality checks to be one of the most important outcomes of the case study in the Czech Republic.

10 General conclusions across all data categories

One of the main aims of the case studies was to publish improved market reports. The data collected as part of the six case studies have been, or will shortly be, published in the five improved national organic market reports and one first regional market report (MOAN case study). This will make a contribution towards filling the many gaps that continue to exist in organic market data collection in Europe.

Another aim of the case studies was to facilitate networking, learning and collaboration among researchers and national bodies who publish market data. This has been achieved in all cases and has resulted in the implementation of additional, or improvement of existing, data collection methods and quality checks. The previous chapters have presented lessons learned for the various data categories considered in the OrganicDataNetwork project. Across all data categories, the following general conclusions can be drawn:

- Data are often collected by many different organisations in a country, some of them involved for commercial reasons; but it is not necessarily an explicit task for all of them to collect organic market data.
- Close collaboration with specific government departments, particularly those that are not directly involved with organic farming (e.g. customs authorities, national statistics authorities) has improved the availability of data in some cases reported here. In other cases, taking part in the case study has raised awareness of the importance of identifying and addressing problems, and the need to increase efforts in organic market data collection; this should result in better data availability in future.
- There is a tension between market transparency and the need to protect commercially sensitive data.
- Sharing organic data between organisations can prevent over-sampling of organic producers and operators, reducing time and cost burdens.
- Sharing data only works if common classification systems are used. The awareness of such systems, and of the benefits of using them required to be raised by continues dialogue between all data collection organisations.
- Efficiently collating data from different sources also requires harmonisation of methods, but different data types require different methodological solutions to improve the data collection.
- The creation of a coherent and durable data collection platform at national level (e.g. Agence Bio in France) can help with data collection and storage.
- Regarding international collaboration, despite the willingness and the interest of some non-EU countries to contribute their national organic data to international/ European databases on organic agriculture, some feel that no “real and concrete” benefit has been so far identified from such a contribution. Those market information and data on EU organic markets that could be interesting for non-EU countries are not always available and, when they are, they are not free of charge. It was therefore felt by some representatives that at present a true and fair exchange of organic market information has not been possible.

All the case study teams found that exchanging ideas and sharing experiences is very important in all contexts to improve the organic market data collection system. Dialogue and discussion are key in initiating data collection and for learning new approaches and data checks as the systems develop. This is particularly relevant where data collectors have different backgrounds and different roles, i.e. from government, research and commercial bodies. Establishing and supporting national networks and regular meetings of different stakeholders, as well as European networks such as the OrganicDataNetwork, can provide a platform to share experiences, to learn from each other and to work together in developing organic market data collection to improve the availability of market data for organic operators and policy makers in Europe.

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